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AND

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GEOCON PROJECT NO. S8130-06-98





JUNE 1999

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SOIL MANAGEMENT PLAN

1.0 INTRODUCTION

On September 2, 1998, the California Department of Transportation (Caltrans) entered into a Voluntary Cleanup Agreement (VCA) with the California Environmental Protection Agency. Department of Toxic Substances Control (DTSC). The purpose of the VCA is to implement appropriate soil management, under the oversight of DTSC, for seismic retrofit activities in upland areas at the following four sites.

- Carquinez 1958 Bridge Structure No. 23-15 R located on eastbound Interstate 80 (I-80) connecting Crockett and Vallejo, California;
- Benicia-Martinez Bridge Structure No. 28-0153 located on I-680 connecting Benicia and Martinez, California;
- San Francisco-Oakland Bay Bridge (SFOBB) West Span Structure No. 34-03 located on I-80 between Yerba Buena Island and San Francisco, California; and
- Richmond-San Rafael Bridge Structure No. 28-0100 located on Interstate 580 (I-580) between Point Richmond and San Quentin, California.

In accordance with the VCA, Caltrans must prepare a Soil Management Plan (SMP), a Health and Safety Plan (HSP), and a Transportation Plan for excavated soils from upland areas.

This SMP has been prepared for the Benicia-Martinez Bridge to ensure that soil excavated from around pier footings which is impacted by metals or petroleum hydrocarbons is handled, stockpiled, and disposed of in accordance with federal, state, and local regulations. The Transportation Plan is included as Appendix A to this SMP. The site HSP was prepared under separate cover.

The location of the Benicia-Martinez Bridge is shown on Figure 1. The project site consists of the northern and southern approach structures to the Benicia-Martinez Bridge on Interstate 680 (I-680) in Solano and Contra Costa Counties, California (Figure 2).

2.0 BACKGROUND AND SITE DESCRIPTION

The Benicia-Martinez Bridge is located on I-680 and connects Benicia and Martinez. California (Figure 1). The project site consists of the upland areas that are located at the northern and southern approaches to the bridge (Figure 2). The northern and southern approaches to the bridge are industrial areas located adjacent to the Carquinez Strait, with both approaches contiguous to Union Pacific Railroad (UPRR) tracks. A railroad bridge is located to the east of the Benicia-Martinez Bridge. The southern approach is located adjacent to the Tosco oil refinery and storage tanks to the south and west, and to the Rhodia Chemical Company (formerly Rhone-Poulenc Basic Chemical Company) to the east.

2.1 Purpose of Project

The purpose of the project is to allow for seismic retrofit to the bridge. Proposed site improvements include seismic retrofits to the northern and southern abutments and selected support piers. Excavation depths on the order of 4.6 meters (15 feet) below ground surface (bgs) will be required to complete the enlargement of the pier footings. A depiction of the retrofit activities and copies of the engineering drawings for the pier footings to be retrofitted are included as Appendix B to this SMP.

Site Description

Three general areas define the project site shown on Figure 2 as follows:

- Piers 1 and 2 at the northern approach which are accessed via Bayshore Road;
- Piers 14 through 16 at the southern approach which are accessed through the Tosco property; and
- Piers 18 and 19 which are accessed via Bridgehead Road.

It is noted that no soil excavation will occur at Piers 17R and 17L, as all retrofit activities scheduled for these piers are above ground surface.

2.3 Site Geology and Hydrogeology

Soil encountered during previous investigations at the site consisted of non-marine terrace deposits, generally comprised of interbedded very dense and hard silty sandstone and sandy claystone to the maximum explored depth of approximately 4.6 meters (15 feet). Refusal conditions were encountered at depth due to the presence of indurated bedrock. There are no known wells within ¼ mile of the site. Groundwater was not encountered during previous soil investigations and it is not expected to be present in any of the excavations.

Soil Investigation

Previous investigations in 1996 and 1997 at the northern and southern approaches indicate that metaland petroleum hydrocarbon-impacted soil exists near the pier footings to be retrofitted. Lead and diesel-range petroleum hydrocarbons are the primary constituents of concern.

The results of previous investigations are summarized below. Description of investigation methods and results are provided in the following documents:

Site Investigation Report, Benicia/Martinez Bridge Seismic Retrofit, Benicia and Martinez. California, dated November 1996, prepared by Geocon Environmental Consultants, Inc.

Site Investigation Report, Benicia/Martinez Bridge Seismic Upgrade, Solano and Contra Costa Counties, California, dated August 1997, prepared by Geocon Environmental Consultants, Inc.

In November 1996, 4 direct-push and 5 hand-auger borings were advanced at the locations shown on Figures 3 and 4. Borings B1 through B4 were advanced to maximum depths ranging from 2.1 to 4.6 meters (7 to 15 feet) using direct-push equipment. Borings B5 through B9 were advanced to maximum depths ranging from 0.9 to 1.5 meters (3 to 5 feet) using hand-auger equipment. Soil samples were generally collected at the surface and from throughout all borings to total depth.

In June 1997, 16 direct-push and 6 hand-auger borings were advanced at the locations shown on Figures 5 and 6. Borings B1 through B16A were advanced to maximum depths ranging from 0.9 to 4.6 meters (3 to 15 feet) using direct-push equipment. Borings B17 through B22 were advanced to maximum depths ranging from 0.6 to 1.5 meters (2 to 5 feet) using hand-auger equipment. Soil samples were generally collected at the surface and from throughout all borings to total depth.

The borings were typically performed in opposite sides of the footings. Seven borings were attempted in 1997 at Pier 2 to obtain soil and groundwater samples from the proposed excavation depths. However, refusal conditions were encountered at two to seven feet bgs in all borings near Pier 2.

A total of 161 discrete soil samples were submitted for laboratory analyses, including 17 California Assessment Manual (CAM-17) metals, total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), benzene, toluene, ethylbenzene, and xylenes (BTEX), and pH. Based on the results of the total metals analyses, 52 soil samples were submitted for Waste Extraction Test (WET) soluble lead analysis, and 50 samples were submitted for Toxicity Characteristic Leaching Procedure (TCLP) soluble lead analysis.

In addition to the discrete sample analyses, five composite soil samples comprised of seven discrete samples from 1997 borings B1, B5, B6, and six discrete samples from 1997 borings B9 and B12 were submitted for CAM-17 metals analysis.

The results of the previous investigation are included as Appendix C and are summarized below:

- Total lead was detected in 160 of the 161 discrete soil samples at concentrations ranging from 2.7 to 3,580 milligrams per kilogram (mg/kg).
- Total lead was detected in only one boring at 3,580 mg/kg, above the TTLC value of 1,000 mg/kg.
- Fourteen of the 52 discrete soil samples submitted for WET analysis had soluble lead concentrations greater than the STLC value of 5 milligrams per liter (mg/L)
- One of the 50 discrete soil samples submitted for TCLP analysis had a soluble lead concentration greater than the TCLP value of 5 mg/L.
- CAM-17 metals concentrations in the five 1997 composite samples did not exceed their respective TTLC values or ten times their respective STLC values.
- TPHg was detected in two samples at 1.5 and 9.5 mg/kg; BTEX was not detected.
- TPHd was detected in 24 of the 161 samples at concentration ranging from 2.9 to 1,170 mg/kg.

3.2 Groundwater Investigation

Previous investigations did not encounter groundwater in any of the borings.

4.0 SOIL MANAGEMENT

4.1 Soil Management Objectives

The objectives of this SMP are to: 1) ensure that soil excavated from around pier footings which is impacted by metals or petroleum hydrocarbons is handled, stockpiled, and disposed of in accordance with federal, state, and local regulations; 2) protect workers and the public from any potential health risk. These objectives will be achieved by:

- Following the protocols outlined in this SMP, and in the Transportation Plan (Appendix A);
- Following the protocols outlined in the site HSP;
- Properly handling and stockpiling of excavated soil at the site; and
- Properly profiling, transporting, and disposing of soil stockpiles.

4.2 Regulatory Criteria

Previous investigations within the site project limits have detected elevated levels of lead and petroleum hydrocarbons in site soil. The regulatory criteria for determining whether these impacted soils are to be classified as California-hazardous for disposal purposes, is based on metals content. Soils are considered California-hazardous when a total metal concentration exceeds its respective Total Threshold Limit Concentration (TTLC) or a WET soluble metal concentration exceeds its respective Soluble Threshold Limit Concentration (STLC). For lead, the TTLC value is 1,000 mg/kg and the STLC value is 5 mg/L.

In addition to the Title 22 California-hazardous waste classification, soil that contains a TCLP soluble metal concentration in excess of its respective TCLP value is considered a waste under Resource Conservation and Recovery Act (RCRA). The TCLP value for lead is 5.0 mg/L.

In addition to the above criteria used to classify a waste for disposal purposes, the Environmental Protection Agency, Region 9, has developed Preliminary Remediation Goals (PRGs) to estimate contaminant concentrations that are protective of humans under residential and industrial land use exposure scenarios. Exceeding a PRG does not necessarily designate a site as not being protective of human health. If concentrations are detected above a PRG, further evaluation of potential site risks is appropriate. The PRG for lead under an "Industrial Soil" exposure scenario is 1,000 mg/kg, which is equivalent to the TTLC. There is no established PRG for petroleum hydrocarbons.

5.0 SOIL EXCAVATION, STOCKPILING, AND PROFILING

5.1 Site Access and Controls

The Site Safety Officer will control site entry of unauthorized personnel. Entry to the site is restricted to authorized, trained, and adequately protected personnel, and is be controlled by perimeter fencing. The locations of perimeter fencing and signage at the northern and southern approaches are shown on Figures 7 and 8.

Northern Approach

Access to the northern approach is via Bayshore Road. Temporary fencing has been placed between Pier 2 and Bayshore Road to restrict unauthorized entry.

Southern Approach

Access to the southern approach is through Tosco property (Piers 14, 15, and 16) and via Bridgehead Road (Piers 18 and 19). Entry to Piers 14, 15, and 16 is controlled by permanent fencing with a guarded entry. Entry to Piers 18 and 19 is controlled by permanent and temporary fencing, with one entry gate near the end of Bridgehead Road.

5.2 Work Zones

Work zones will be established to ensure that impacted excavated materials are not deposited across the site or on public roads. The Site Safety Officer is responsible for the setup and maintenance of the work zones. Plot plans showing the work zones for the pier footings are included as Appendix D to this SMP.

Exclusion Zone

An exclusion zone will be established surrounding each pier footing where excavation is planned. The exclusion zone will be clearly marked with the use of placards, caution tape, and/or signs as shown on Figure 7 and 8, and in Appendix D. Only those workers possessing evidence of the required health and safety training will be permitted in the designated exclusion zones.

Contamination Reduction Zone

A contamination reduction zone will be located adjacent to each exclusion zone for the decontamination of personnel and equipment. All personnel leaving an exclusion zone must follow the decontamination procedures outlined in the site HSP.

Support Zone

All other areas of the site that are not designated an exclusion zone or a contamination reduction zone will be used as support zones.

5.3 Soil Excavation

It is anticipated that it will be necessary to excavate approximately 40 to 80 cubic meters (m³) [50 to 100 cubic yards (yd³)] from around each pier footing. Following soil removal, temporary shoring will be used to maintain the excavation. Excavated soil will be transferred directly from the excavation to a transport vehicle or a stockpile location identified by the Project Manager. Soil excavated from specific depth intervals will be segregated into separate stockpiles based on previous investigation results. For example, shallow soil excavated from the first few feet will be segregated from soil excavated from lower depths.

During excavation, water may be used to minimize airborne dust. Care will be taken to prevent accumulation and runoff to surface waters. The application of water will comply with Caltrans' Standard Specifications, Section 10 – Dust Control and Section 17 – Watering, that say: "Water ... for laying dust shall be applied by means of pressure-type distributors or pipe lines equipped with a spray system or hoses with nozzles that will insure a uniform application of water."

5.4 Stockpile Construction and Maintenance

Excavated soil will be stockpiled adjacent to each pier footing on undamaged 60-mil high density polyethylene or equivalent impermeable barrier. If the stockpile location is on a paved surface, the thickness of the barrier may be reduced to 20 mils. All seams in the barrier will be sealed to prevent leakage and the dimensions of the impermeable barrier will be greater than the dimensions of the stockpile at all times. In addition to the perimeter fencing used to control site access, temporary fencing will also be used to isolate the soil stockpiles from the remainder of the site.

Soil will be added to the stockpiles as described in the Sampling and Analysis Workplan (Appendix E).

At the end of each day, stockpiles will be covered with 12-mil polyethylene or an equivalent barrier to prevent windblown dispersion and precipitation run-on or run-off. When more than one sheet is required to cover a stockpile, the sheets will overlap a minimum of 0.5 meter (1.5 feet) to prevent water from flowing onto the stockpiled material. The cover will be secured to keep it in place at all times.

5.5 Site Inspection

Soil stockpiles and other pollution prevention measures at the site will be inspected and their integrity will be maintained. Stockpiles will be inspected at the end of each workday. Copies of site-specific inspection checklists are included as Appendix F to this SMP.

5.6 Stockpile Profiling and Disposal

No additional soil sampling and analysis will be performed prior to excavation. Following the completion of excavation at each pier footing, composite soil samples will be collected from each soil stockpile to profile the stockpiles for disposal purposes. Soil sampling and analysis procedures are described in the site Sampling and Analysis Workplan (Appendix E)

Upon receipt of analytical results, the soil stockpiles will be disposed of at an appropriate landfill as discussed in the Transportation Plan (Appendix A). In addition to the TTLC, STLC, and TCLP criteria outlined in Section 4.2 and in the Transportation Plan, wastes containing total lead in excess of 350 mg/kg should be disposed at a Class I hazardous waste disposal facility per section 25157.8 of the California Health and Safety Code.

5.7 Excavation Backfill

Materials used to backfill excavations will comply with Caltrans' Standard Specifications. Section 19 – Earthwork, that says: "Imported borrow shall be of a quality suitable for the purpose intended, free of organic matter or other unsatisfactory material." The onsite Caltrans Resident Engineer (RE) will verify the source of backfill material. If the RE determines that the source is questionable, Caltrans will require testing to confirm that chemicals of concern are not present.

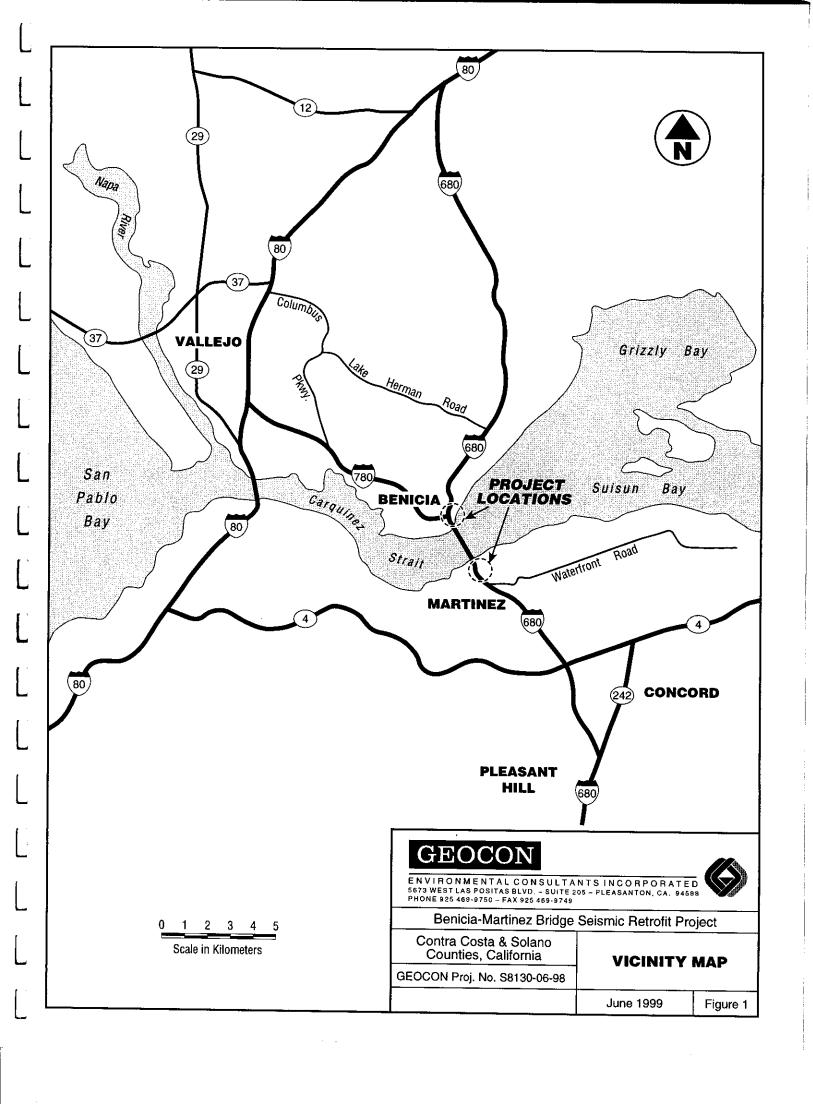
6.0 REGULATORY PERMITS

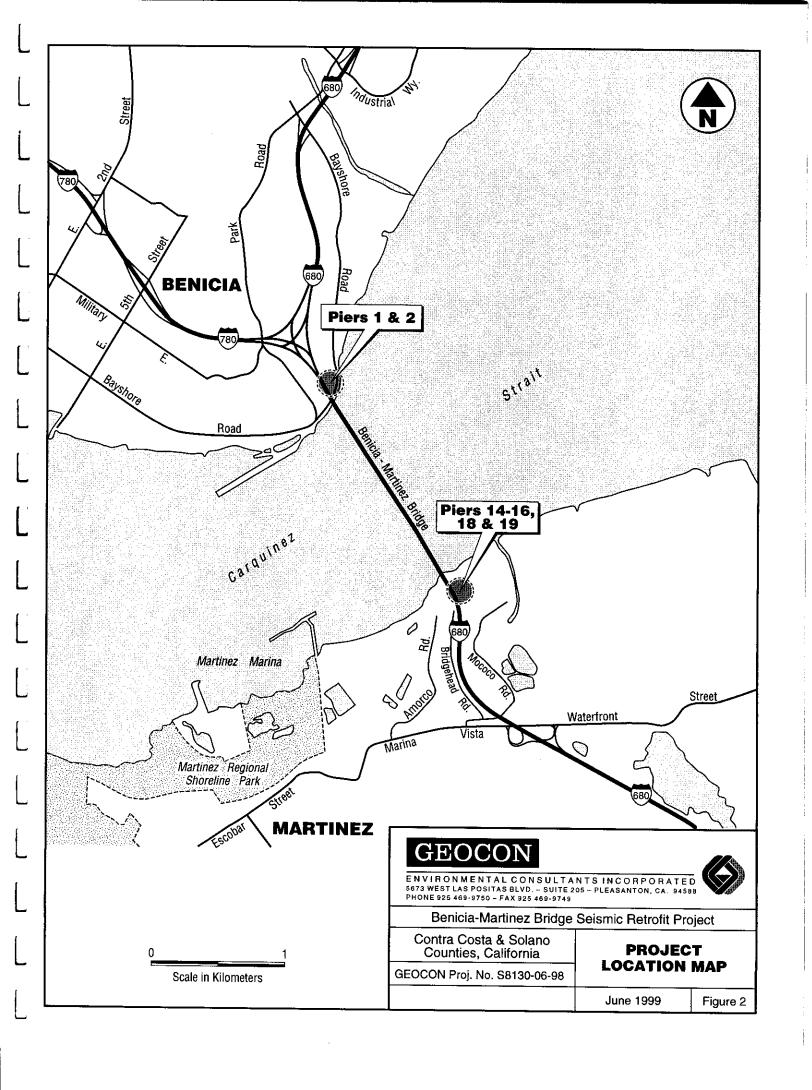
The project will conform to the requirements of Permit No. CAS029998 issued by the California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB). This permit regulates the storm water discharges associated with the seismic retrofit construction activities. A copy of the permit is included as Appendix G to this SMP.

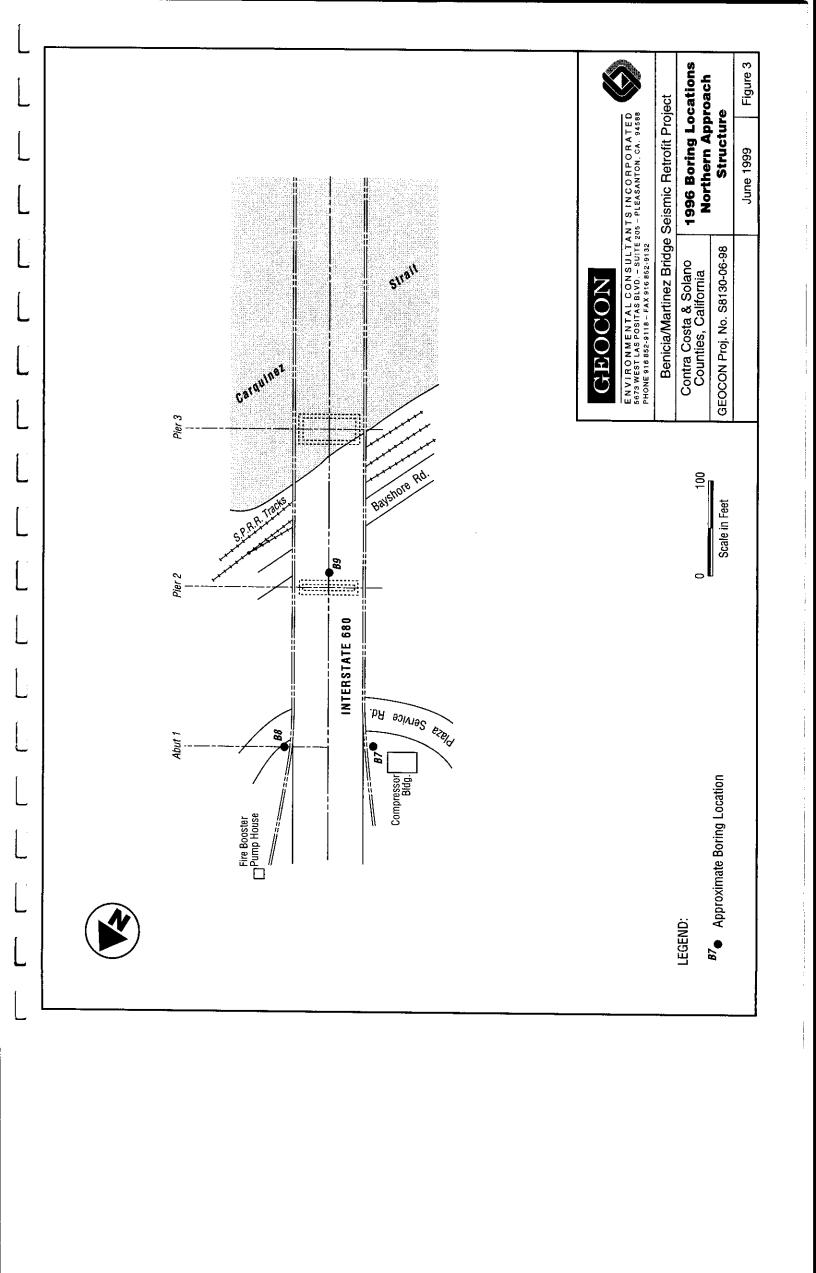
No other applicable regulatory permits have been issued for the upland excavation work.

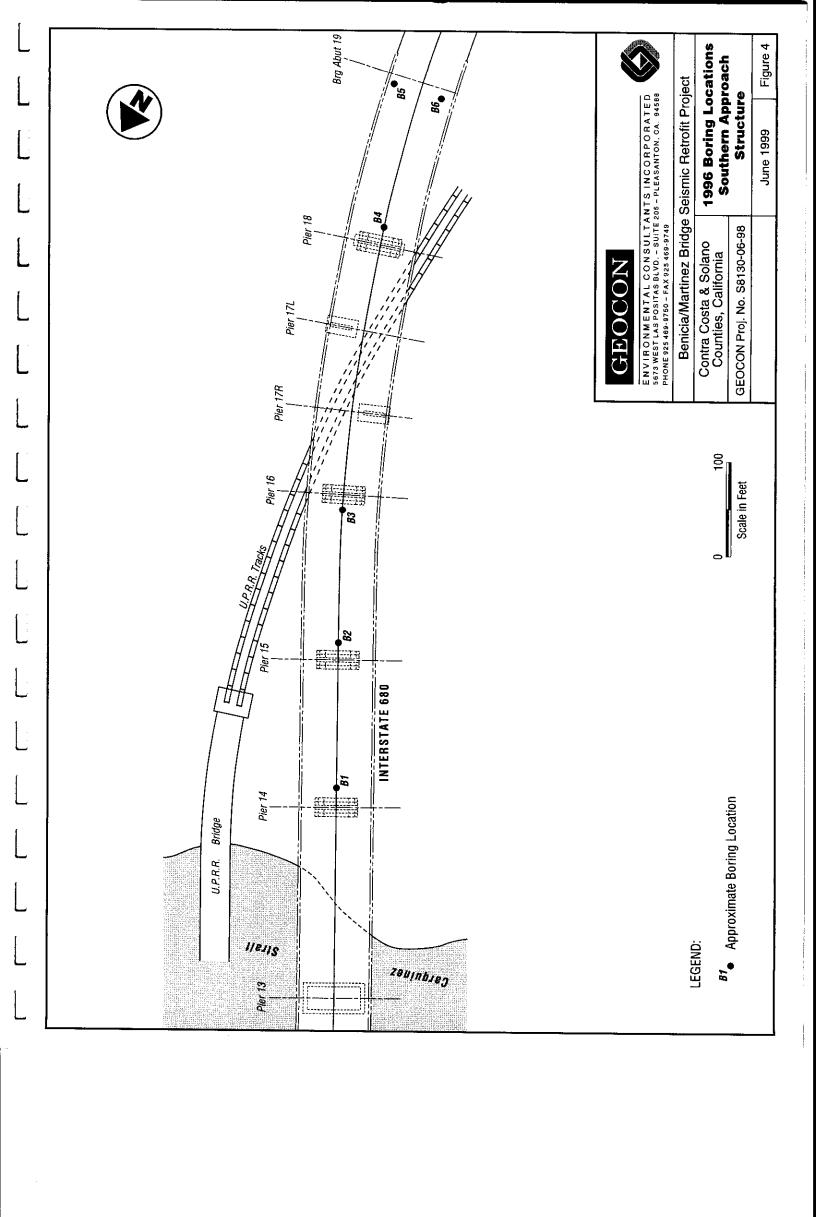
7.0 SCHEDULE

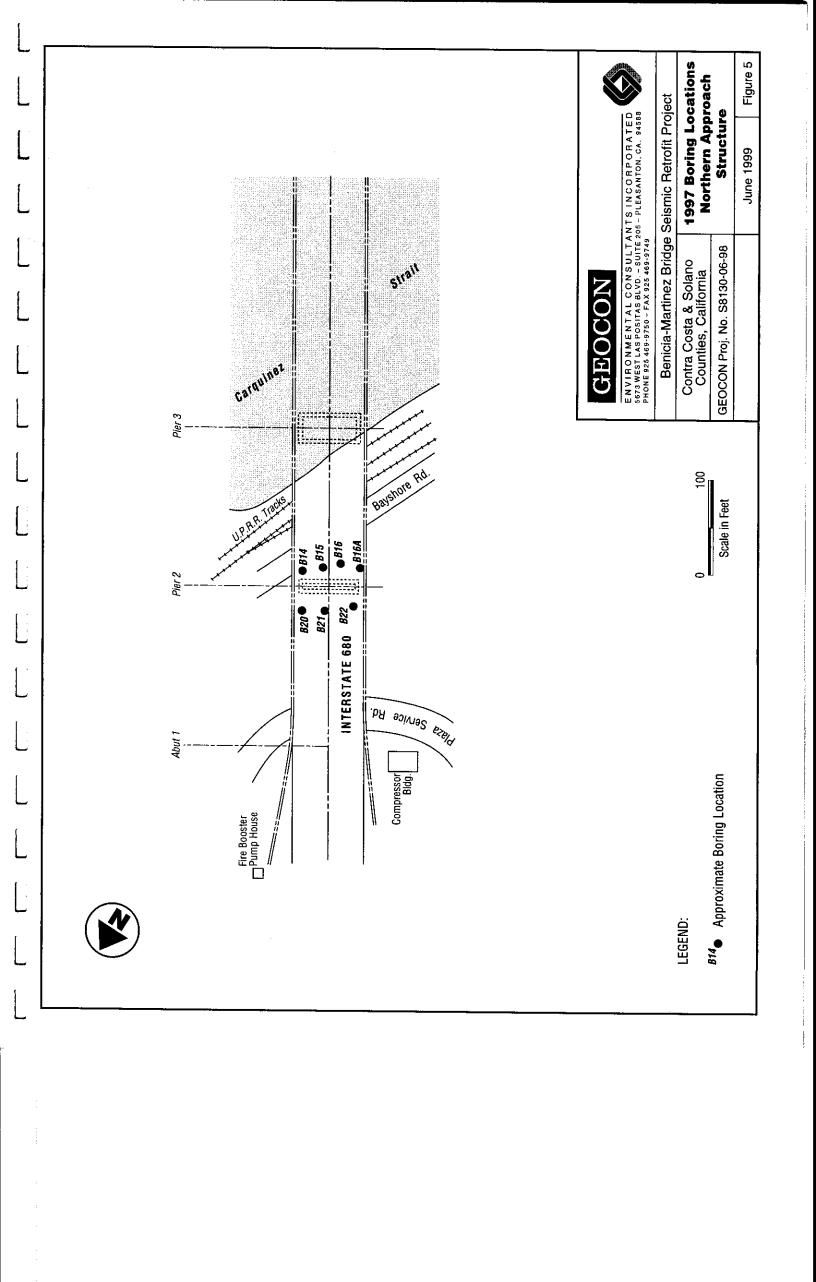
The excavation schedule for the project is included as Appendix H to this SMP. The excavation activities at the southern approach pier footings began in late January 1999 and are scheduled to be complete by early May 1999. Excavation activities for retrofits at the northern approach scheduled to begin in June 1999. The entire project, including superstructure retrofit construction activities, is scheduled to be complete in August 2000.

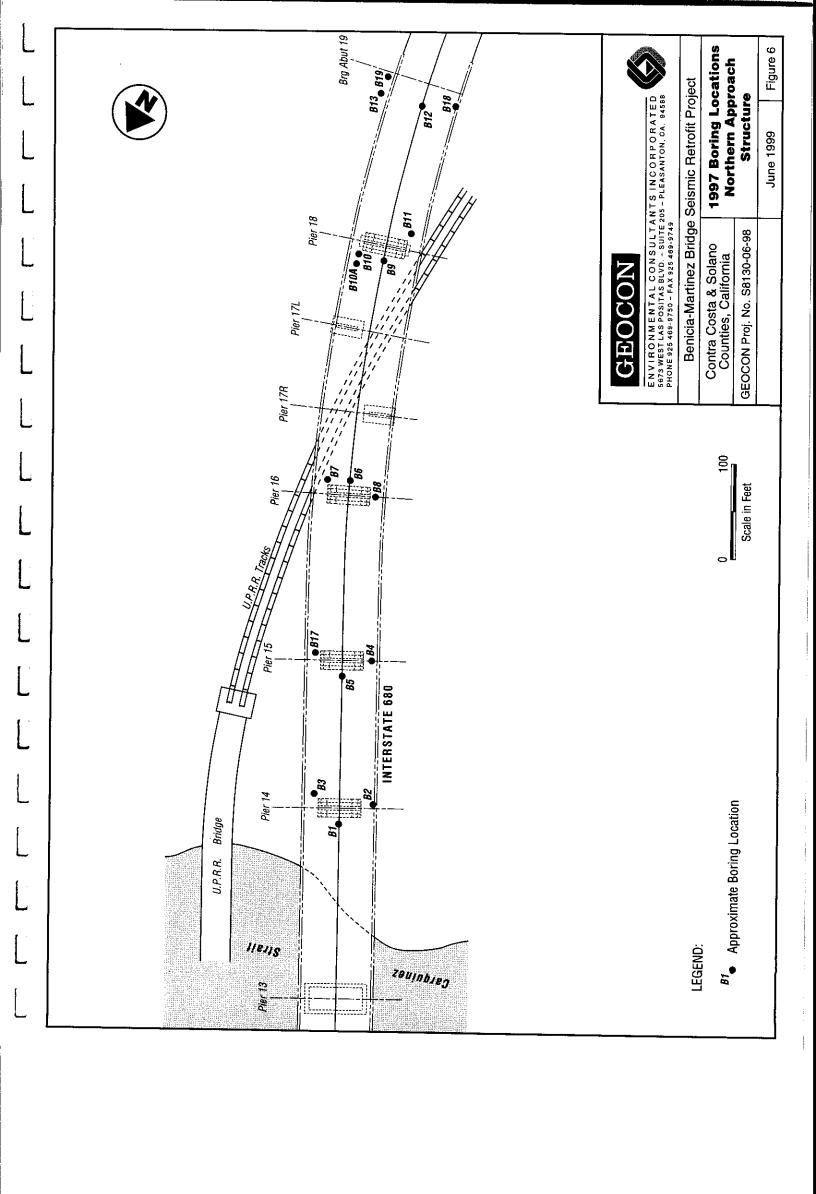


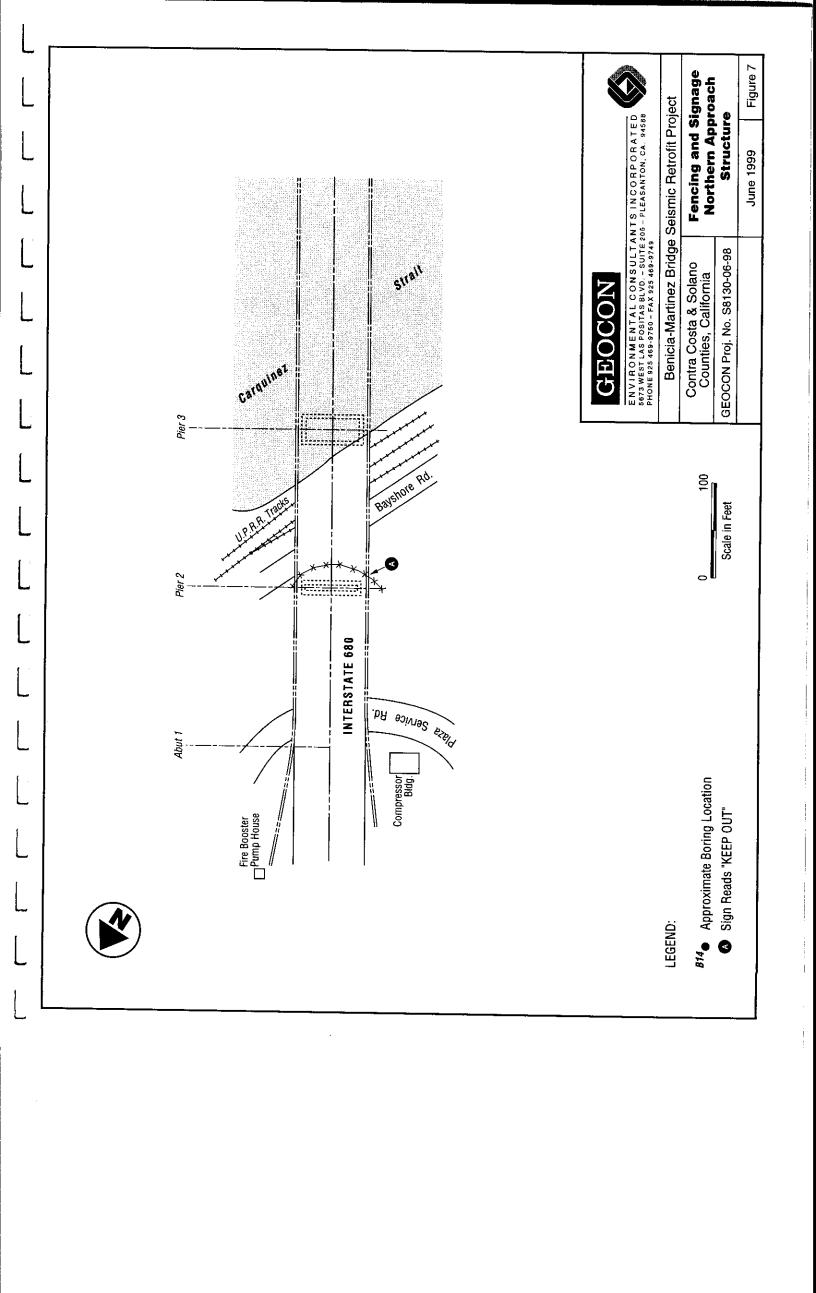


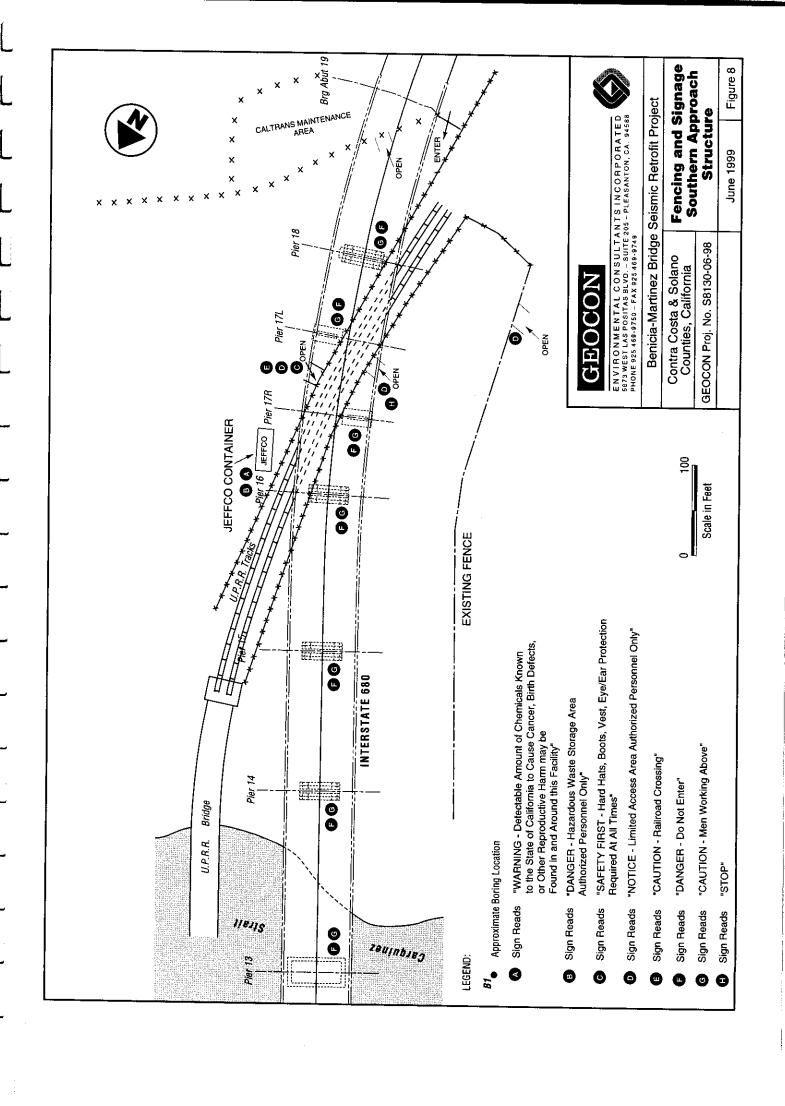












APPENDIX A TRANSPORTATION PLAN

A.1 Purpose

The purpose of this transportation plan provided is to provide protocols to minimize the potential health, safety, and environmental risks resulting from the transportation of soil stockpiles to appropriate disposal facilities. The transportation of impacted soils will be conducted in accordance with all federal, state, and local statutes, regulations, and ordinances

A.2 Material Characteristics

It is anticipated that approximately 40 to 80 m³ (50 to 100 yd³) of soil will be excavated from around each pier footing and stockpiled for disposal. While previous soil investigation results indicate that a portion of the material may be classified as either California-hazardous or RCRA-hazardous, the results of the stockpile sampling and analysis will be used to profile the material for disposal purposes. It is anticipated that the majority of the stockpiled soil will not be classified as California-hazardous or RCRA-hazardous, and will be suitable for disposal at a Class II landfill.

A.3 Disposal Facilities

Impacted soil that is not classified as California-hazardous or RCRA-hazardous will be disposed of at the BFI Vasco Road Sanitary Landfill in Livermore, California. This includes soil with total metal concentrations less than STLC, TTLC, and TCLP values. The Vasco Sanitary Road Landfill has an active Subtitle D cell that exceeds the design and construction criteria for both the Class II (CCR 23. Chapter 15) and Federal Subtitle D (40 CFR, Part 257) regulations.

Excavated soil that exceed STLC, TTLC, and/or TCLP values, classified as California-hazardous and/or RCRA-hazardous, will be disposed of at either Chemical Waste Management's disposal facility in Kettleman City, California or at Laidlaw Environmental Services' McKittrick Waste Treatment facility in Buttonwillow, California. In addition, those soils with total lead in excess of 350 mg/kg will also be disposed of at the Class I facilities listed above.

A.4 Soil Transportation

Stockpiled soil will be loaded into end-dump trucks with a capacity of approximately 16 cy for transport to appropriate disposal facilities. After loading is complete, all trucks will proceed to southbound I-680. Depending upon which stockpile is being transported, the trucks may follow one of the following three routes to I-680. Note that none of the routes pass through residential areas.

- From Piers 1 and 2 -Trucks will proceed north on Bayshore Road to the I-680 southbound onramp.
- From Piers 14 through 16 Trucks will proceed south through the Tosco facility: and east on Marina Vista Avenue to the 1-680 southbound on-ramp.
- From Piers 18 and 19 Trucks will proceed south on Bridgehead Road; west on Mococo Road; and east on Marina Vista Avenue to the I-680 southbound on-ramp.

After entering southbound I-680, trucks will follow the below routes:

- <u>To Vasco Road</u> Trucks will proceed south on I-680; east on I-580; and north on Vasco Road to the disposal facility (Figure A1).
- <u>To Kettleman City</u> Trucks will proceed south on I-680; east on I-580; and south on Interstate 5 (I-5) to Kettleman City. In Kettleman City, the trucks will proceed west on State Route 41; turn on Old Skyline Road; and into the disposal facility (Figure A2).
- <u>To Buttonwillow</u> Trucks will proceed south on I-680; east on I-580; and south on I-5 to Buttonwillow, California. In Buttonwillow, the trucks will turn right on Lockern Avenue and proceed to the disposal facility (Figure A3)

A.5 Traffic Control and Loading Procedures

No transportation or traffic control is necessary for stockpile removal from Piers 14 through 19, as these construction areas are accessed via private roads. However, additional care will be taken while crossing the UPRR tracks when removing stockpiles from Piers 14 through 16. Minor traffic control will be required for stockpile soil removal from Pier 2, as this pier is accessed via Bayshore Road. The degree of traffic control along Bayshore Road will depend on site conditions encountered at the time of stockpile removal. If traffic on Bayshore Road presents a problem as determined by the Project Manager or Site Safety Officer, flagmen will be used to ensure safe and regulated flow of trucks. machinery, vehicles, and pedestrian traffic. The loading and removal of stockpiles from Pier 1 will be performed in conjunction with the lane closures necessary to perform other retrofit work on the bridge superstructure.

Entry to the work sites will be controlled by fencing and caution tape, and site access will be monitored by the site safety officer, on-site contractor, and subcontractor personnel. Soils will be loaded into trucks using an excavator, backhoe, or front-end loader. If the soil is dry, water will be used to minimize airborne dust. The trucks transporting hazardous waste will be equipped with visqueen bed liners and cover tarps to prevent the release of dust once the trucks leave the site.

After loading, all impacted materials on the exteriors of the trucks will be removed and placed either into the current truck, a designated stockpile of similar material, or the excavation of origin, prior to the trucks leaving the exclusion zone. No impacted material will be deposited on public roads.

A.6 Record Keeping

The contractor's project manager or designee will maintain daily field logs. Each daily log will include the date, time, weight/volume of soil/ soil classification, trucking company, driver, and type of vehicle used. Soils that are classified as California-hazardous or RCRA-hazardous will be delivered with a Uniform Hazardous Waste Manifest. Soil that is classified as non-hazardous will be accompanied by a bill of lading to track the shipment.

Each individual manifest or bill of lading will be completely filled out and signed by Caltrans (the generator) and transporter prior to leaving the site. Upon arrival at the disposal facilities, the manifest or bill of lading will be given to and signed by the disposal facility.

A.7 Driver Health and Safety

All workers transporting impacted soils will be properly trained and certified in hazardous waste operations. Transporters hauling hazardous waste will be registered hazardous waste haulers. Drivers will not be allowed to get out of their cabs or roll down their windows during loading of soil stockpiles. After loading is complete, the drivers will proceed to the decontamination area.

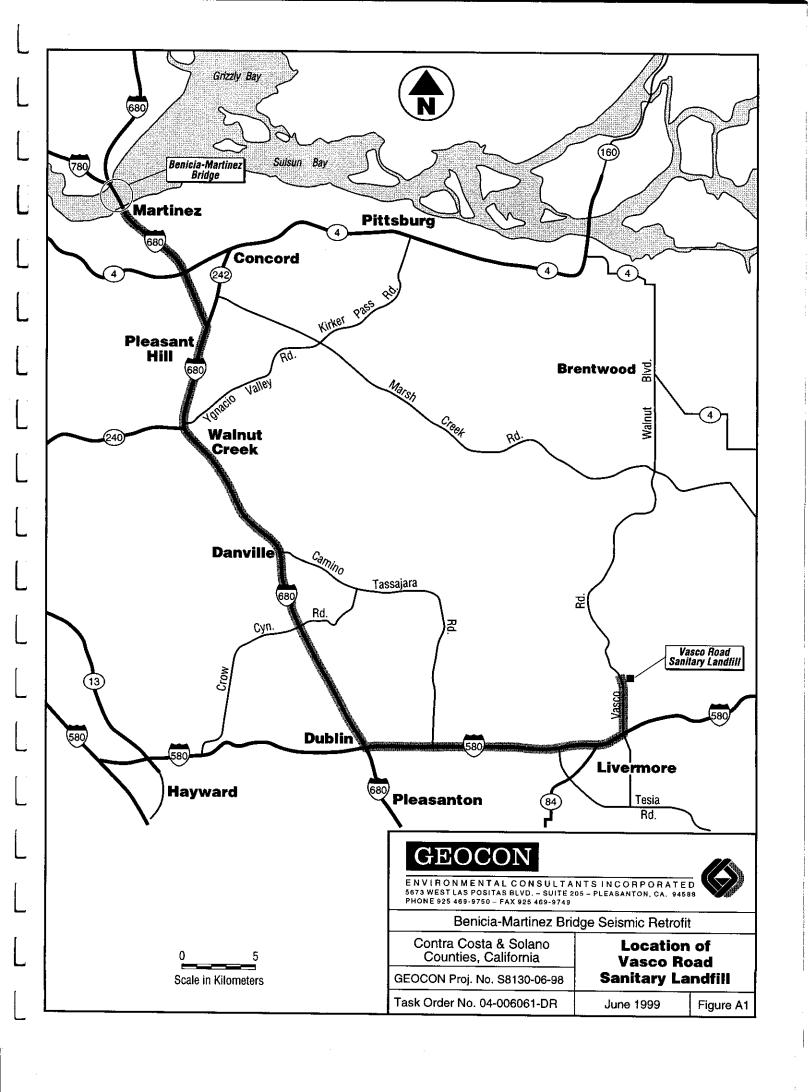
A.8 Contingency Plan and Emergency Response

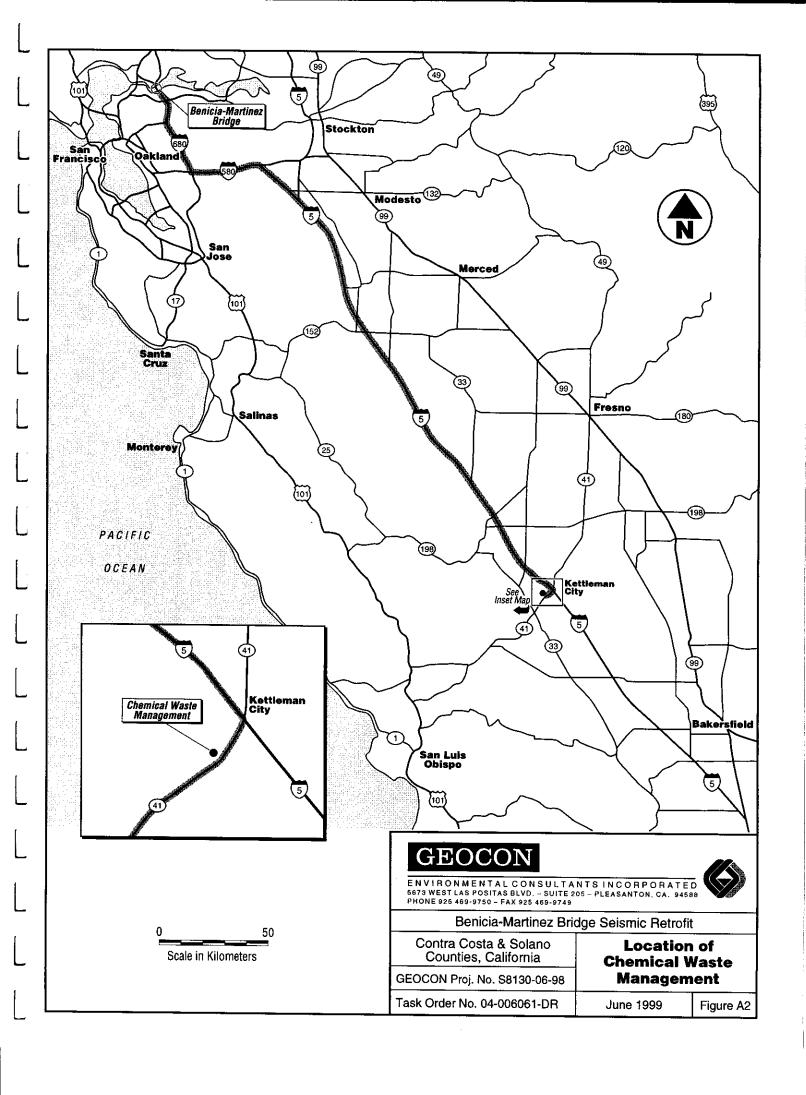
Due to the number of variables that could impact any off site spill scenario, it is not appropriate to describe specific spill mitigation procedures in this document. The onsite contingency plan included in the site HSP, which includes protocols for emergency response/accident investigation, will be provided to the driver.

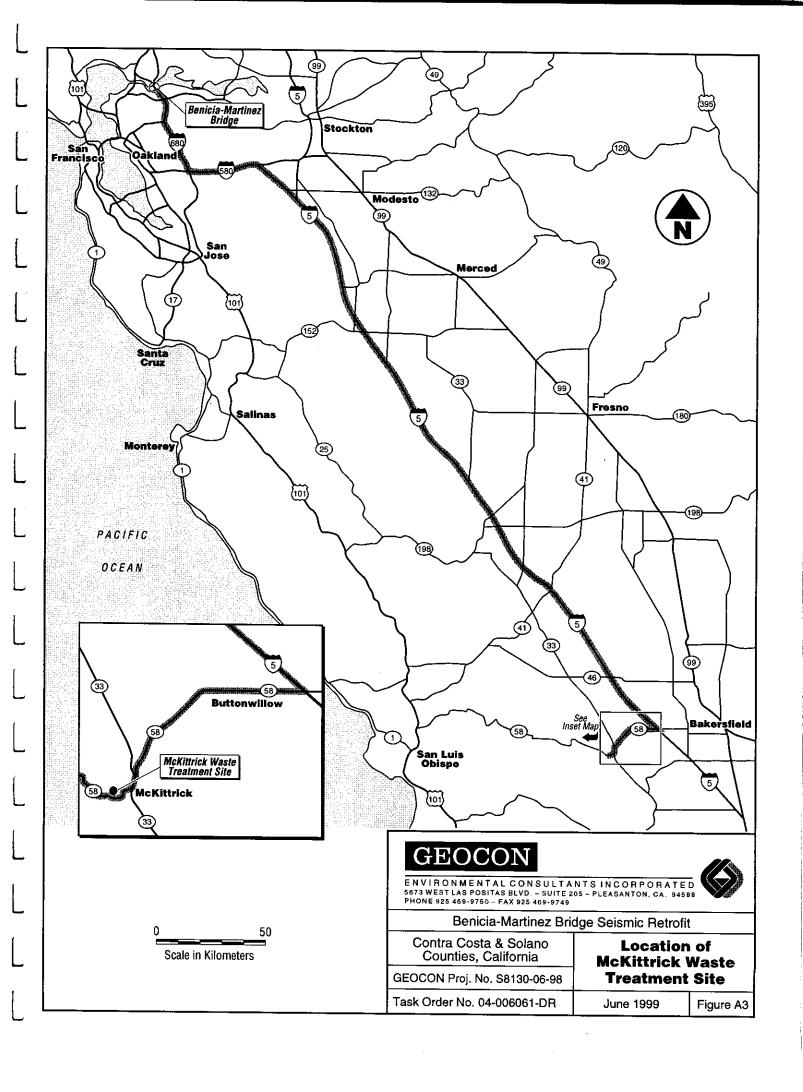
In the event of an accident, emergency services, such as fire, medical, or law enforcement, will be requested by the driver either over the truck radio or by calling 911. The driver will also contact the SSO by calling (925) 946-0455.

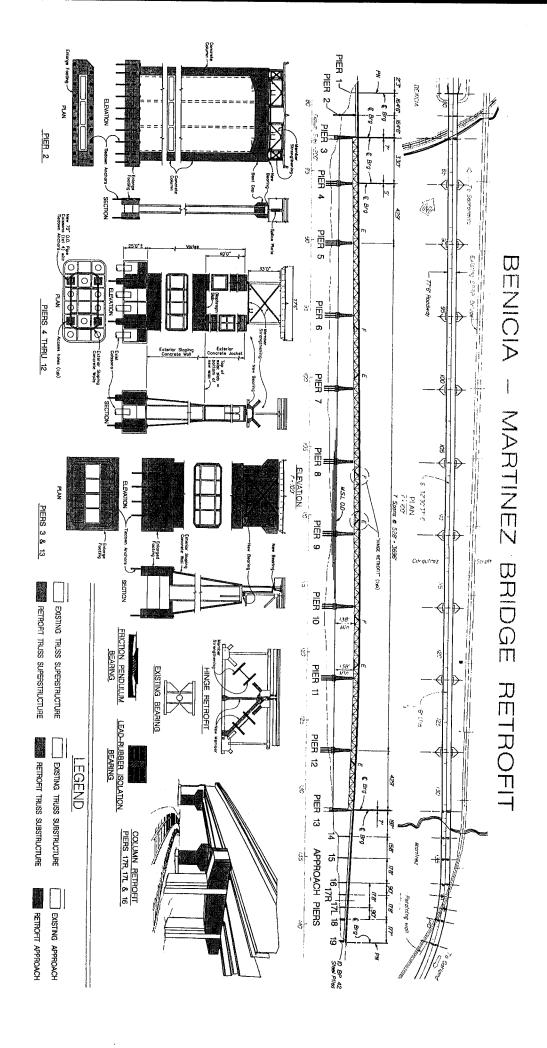
The most likely potential for spillage is an airborne release of dust during transport due to a loose tarp. If this occurs, the driver will immediately stop and secure the tarp. If the tarp has ripped and cannot be used, the driver will obtain a replacement tarp.

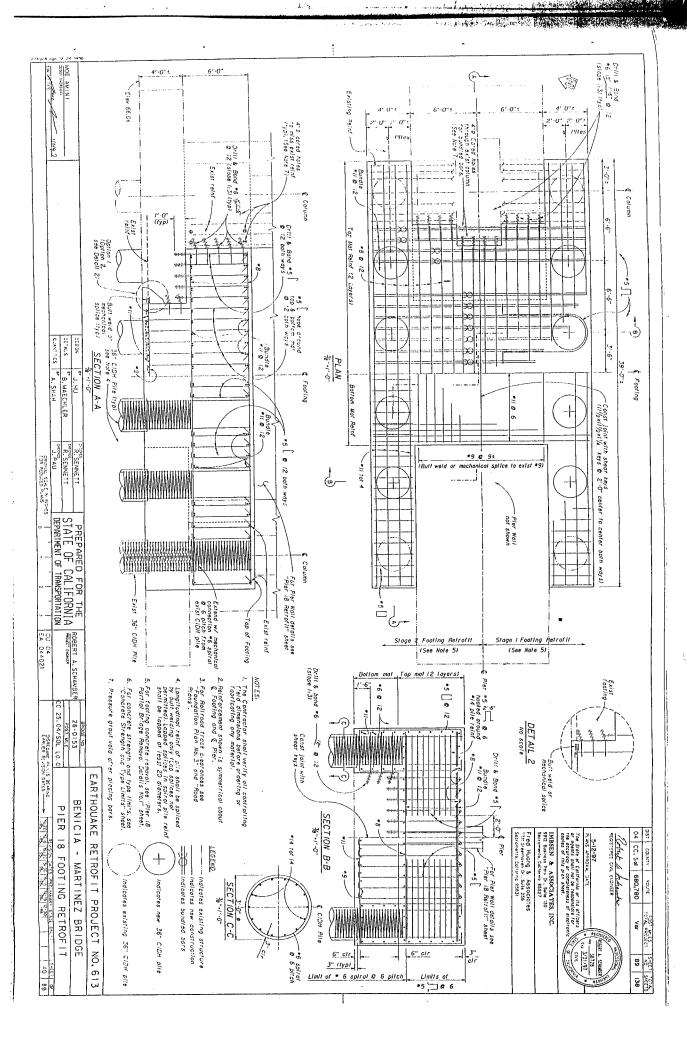
In the event of a spill, accident, or breakdown, the driver will remain with the truck until law enforcement or other assistance arrives. The driver will place traffic cones and keep observers from the area. The driver will not attempt to cleanup spilled material, as an emergency response team will handle this.

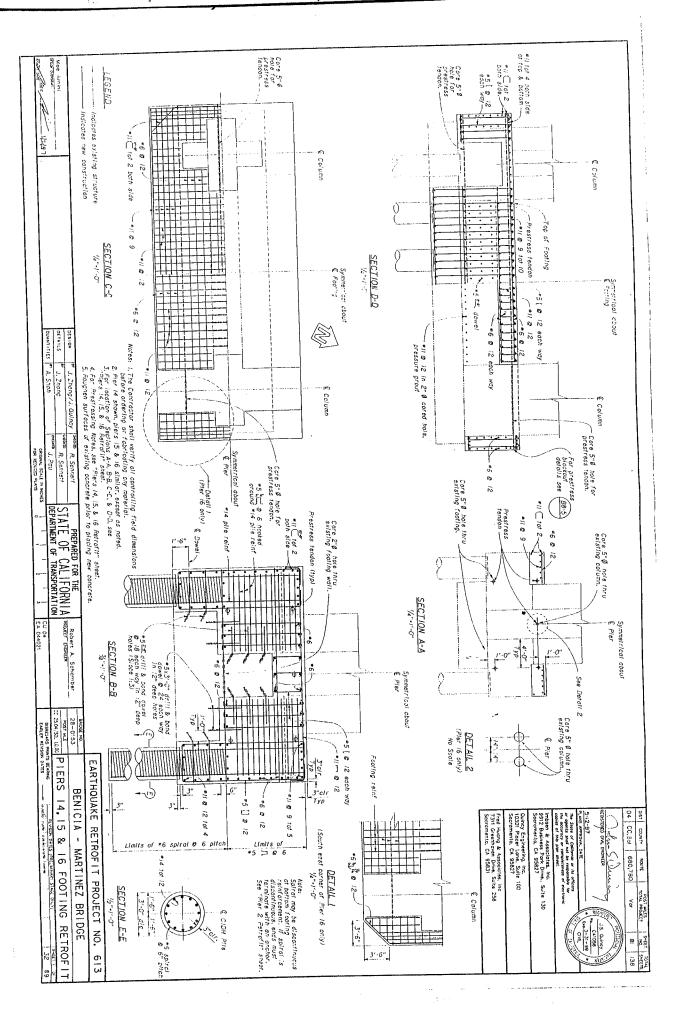


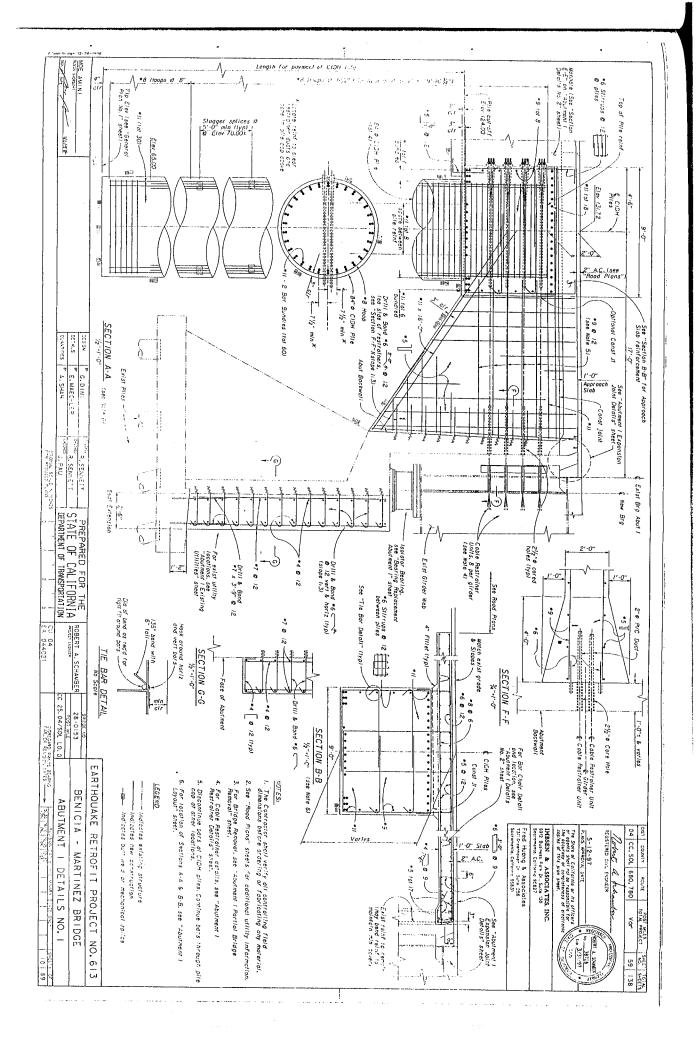


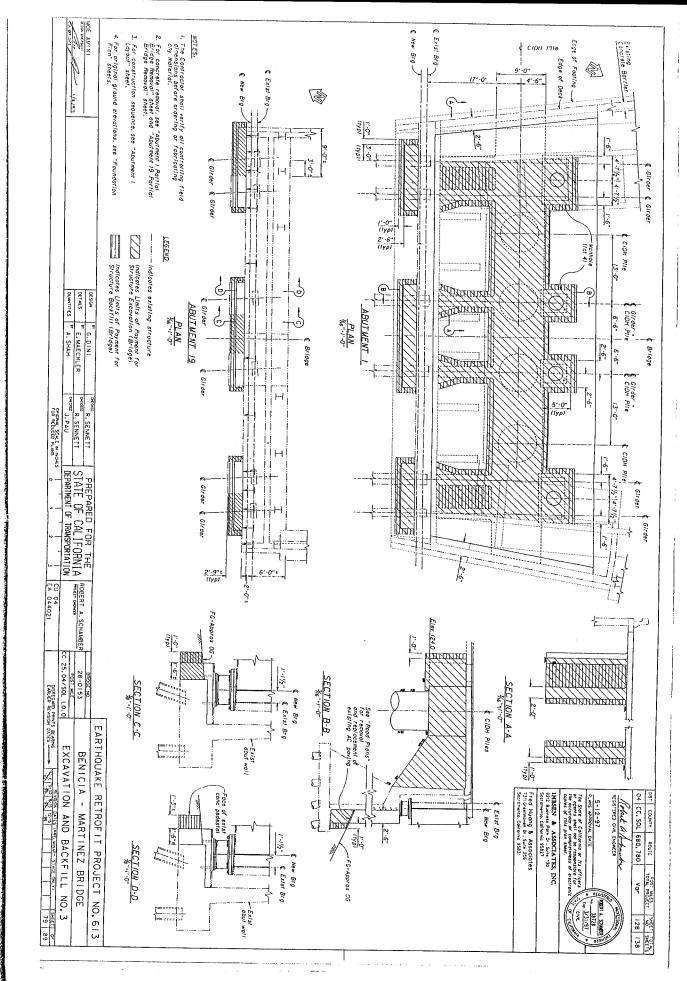




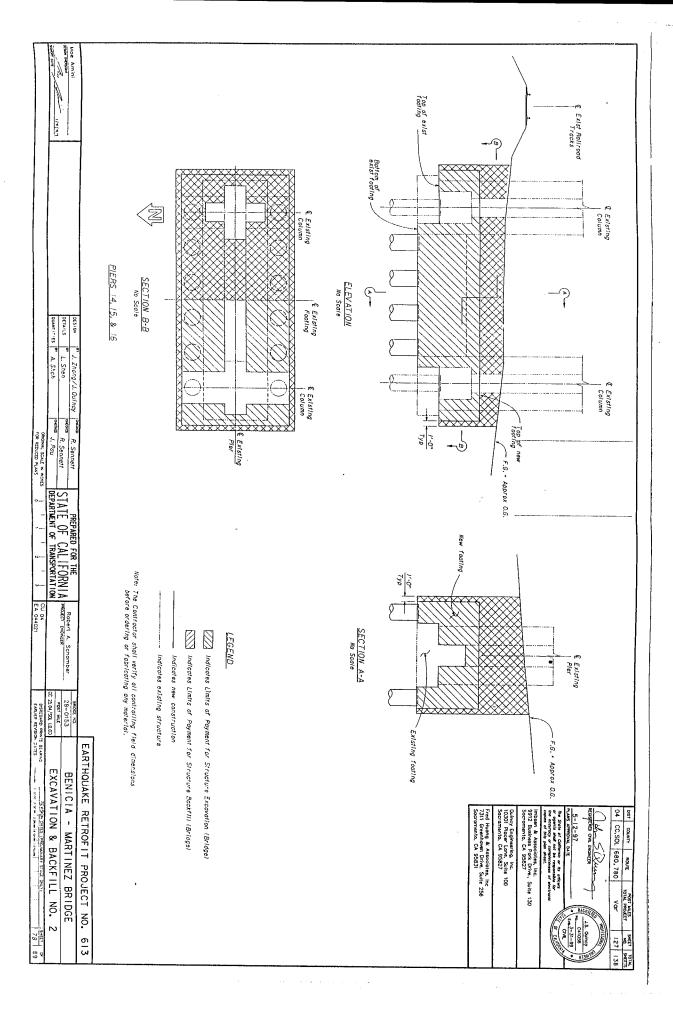


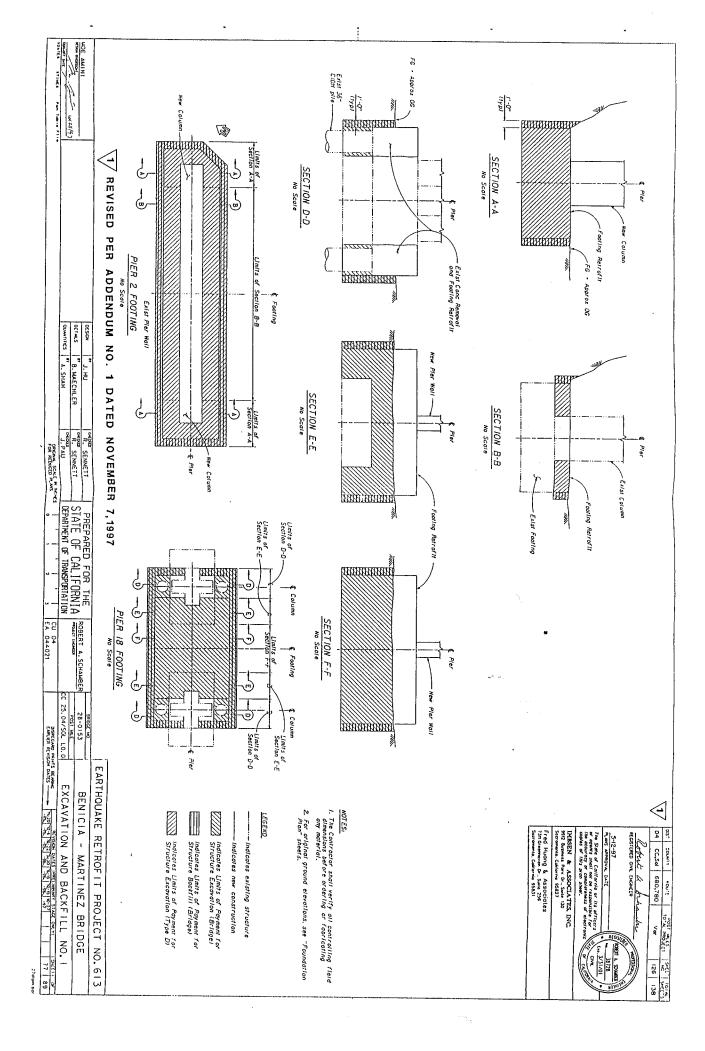






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SITE INVESTIGATION REPORT

BENICIA/MARTINEZ BRIDGE SEISMIC RETROFIT BENICIA AND MARTINEZ, CALIFORNIA



CALIFORNIA DEPARTMENT OF TRANSPORTATION DISTRICT 4

OAKLAND, CALIFORNIA

TASK ORDER NO. 04-044011-01 GEOCON PROJECT NO. S8100-06-78

NOVEMBER 1996



TABLE 1 SUMMARY OF SOIL ANALYTICAL RESULTS - TITLE 22 METALS BENICIA/MARTINEZ BRIDGE CALTRANS TASK ORDER NO. 04-044011-01

SAMPLE 1.D.	B1-1	B1-3	B1-5	B1-10	B2-1	B2-3	B2-5	10XSTLC	TTLC
ANALYTE				Results	s in milligram	s per kilogran	(mg/kg)		
Antimony	0.34	0.45	0.38	0.39	0.38	0.30	0.33	150	500
Arsenic	8.2	8.6	7.8	<0.25	7.0	5.7	5.6	50	500
Barium	55	96	81	1.9	191	96	76	1,000	10,000
Beryllium	0.053	0.19	< 0.05	<0.05	0.41	0.055	0.31	7.5	75
Cadmium	< 0.15	< 0.15	< 0.15	<0.15	< 0.15	< 0.15	< 0.15	10	100
Chromium ⁽¹⁾	41	39	35	24	38	30	31	5,600	2,500
Cobalt	8.9	12	12	18	12	11	12	800	8,000
Соррег	31	41	44	103	33	49	26	250	2,500
Lead	25	31	14	<0.25	11	27	7.9	50	1,000
Mercury	< 0.10	0.10	< 0.10	0.70	<0.10	<0.10	<0.10	2	20
Molybdenum	1.2	0.94	0.77	0.78	0.54	0.65	0.43	3,500	3,500
Nickel	36	50	0.41	18	39	33	34	200	2,000
Selenium	1.5	1.4	1.4	1.7	1.7	1.2	1.3	10	100
Silver	< 0.05	<0.05	< 0.05	<0.05	<0.05	< 0.05	<0.05	50	500
Thallium	3.2	3.6	4.3	4.8	3.9	3.2	3.2	70	700
Vanadium	42	40	40	78	41	34	32	240	2,400
Zine	59	75	57	67	33	55	33	2,500	5,000

Notes: B1-3

Sample depth in feet below surface grade.

Boring identification.

Dup = Analysis was duplicated by laboratory.

Less than laboratory detection limits.

10 X STLC = Ten times the Soluble Threshold Limit Concentration.

TTLC = Total Threshold Limit Concentration. If the concentration of a toxic substance in a waste exceeds TTLC, then the waste is considered hazardous (California Code of Regulations, Title 22, 66206).

(1) = Listed TTLC and 10 x STLC is for total chromium.

For chromium (VI), TTLC and 10 x STLC are 500 and 50, respectively.

TABLE 1 (continued) SUMMARY OF SOIL ANALYTICAL RESULTS - TITLE 22 METALS BENICIA/MARTINEZ BRIDGE CALTRANS TASK ORDER NO. 04-044011-01

SAMPLE I.D	B2-10	B2-15	B3-1	B3-1 Dup	B3-3	B3-5	B3-10	10XSTLC	TTLC
ANALYTE				Results	in milligran	ıs per kilogra	m (mg/kg)		
Antimony	0.34	0.42	0.26	0.31	0.32	0.30	0.47	150	500
Arsenic	6.9	6.0	3.3	3.4	5.2	4.3	5.3	50	500
Barium	134	108	82	101	99	135	34	1,000	10,000
Beryllium	0.25	0.19	< 0.05	0.14	<0.05	0.38	< 0.05	7.5	75
Cadmium	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	<0.15	< 0.15	10	100
Chromium (i)	41	36	21	20	27	26	42	5,600	2,500
Cobalt	13	16	12	11	15	11	5.8	800	8,000
Copper	36	39	59	34	83	22	37	250	2,500
Lead	17	7.2	16	23	93	7.4	6.1	50	1,000
Mercury	< 0.10	< 0.10	0.11	<0.10	0.37	<0.10	< 0.10	2	20
Molybdenum	0.68	0.66	0.69	0.45	1.1	0.41	0.45	3,500	3,500
Nickel	48	45	23	23	30	33	23	200	2,000
Selenium	1.7	1.4	1.2	0.88	1.4	1.2	1.3	10	100
Silver	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	< 0.05	50	500
Thallium	4.3	4.2	3.3	2.4	4.2	2.9	2.9	70	700
Vanadium	36	31	37	25	47	32	30	240	2,400
Zinc	51	56	53	47	70	27	44	2,500	5,000

Notes:

Sample depth in feet below surface grade.

Boring identification.

Dup Analysis was duplicated by laboratory.
Less than laboratory detection limits.
Ten times the Soluble Threshold Limit Concentration.

10 X STLC TTLC

= Total Threshold Limit Concentration. If the concentration of a toxic substance

in a waste exceeds TTLC, then the waste is considered hazardous (California Code of Regulations, Title 22, 66206).

= Listed TTLC and 10 x STLC is for total chromium.

For chromium (VI), TTLC and 10 x STLC are 500 and 50, respectively. **(1)**

Notes:

TABLE 1 (continued) SUMMARY OF SOIL ANALYTICAL RESULTS - TITLE 22 METALS BENICIA/MARTINEZ BRIDGE CALTRANS TASK ORDER NO. 04-044011-01

SAMPLE I.D.	B3-12	B4-1	B4-3	B4-5	B4-7	B5-1	B5-3	10XSTLC	TTLC
ANALYTE				Res	ults in millig	grams per kilo	ogram (mg/kg)		
Antimony	0.28	0,34	0.28	0.35	0.40	0.31	0.27	150	500
Arsenic	5.2	5.4	5.1	6.6	6.7	13	6.3	50	500
Barium	79	85	69	98	363	82	126	1,000	10,000
Beryllium	0.24	< 0.05	< 0.05	0.13	0.15	<0.05	0.19	7.5	75
Cadmium	<0.15	<0.15	< 0.15	<0.15	< 0.15	< 0.15	< 0.15	10	100
Chromium (1)	28	19	31	30	30	21	13	5,600	2,500
Cobalt	9.8	8.6	9.3	11	26	9.2	7.7	800	8,000
Copper	24	22	23	38	35	219	15	25 0	2,500
Lead	5.8	18	3.6	6.2	4.5	3,580	8.3	50	1,000
Mercury	<0.10	0.12	< 0.10	<0.10	< 0.10	0.31	< 0.10	2	20
Molybdenum	0.46	0.64	0.64	0.61	1.2	1.1	0.58	3,500	3,500
Nickel	26	23	42	43	67	26	21	200	2,000
Selenium	1.2	1.5	1.3	1.3	2.2	1.6	1.2	10	100
Silver	< 0.05	<0.05	< 0.05	<0.05	<0.05	0.24	< 0.05	50	500
Thallium	3.1	3.6	3.4	3.5	6.2	3.7	2.9	70	700
Vanadium	27	39	30	29	29	35	21	240	2,400
Zinc	34	52	49	63	69	143	33	2,500	5,000

Sample depth in feet below surface grade.

Boring identification.

Dup = Analysis was duplicated by laboratory.

Less than laboratory detection limits.

The times the Soluble Threshold Limit Concentration.

TTLC = Total Threshold Limit Concentration. If the concentration of a toxic substance in a waste exceeds TTLC, then the waste is considered hazardous (California Code of Regulations, Title 22, 66206).

Listed TTLC and 10 x STLC is for total chromium.

For chromium (VI), TTLC and 10 x STLC are 500 and 50, respectively.

TABLE 1 (continued) SUMMARY OF SOIL ANALYTICAL RESULTS - TITLE 22 METALS BENICIA/MARTINEZ BRIDGE CALTRANS TASK ORDER NO. 04-044011-01

SAMPLE LD	B5-3 Dup	B5-5	B6-1	B6-3	B6-5	B6-5 DUP	10XSTLC	TTLC
ANALYTE			Resu	lts in milligrams	per kilogram (i	mg/kg)		
Antimony	<0.25	0.27	<0.25	0.29	<0.25	<0.25	150	500
Arsenic	5,4	7.2	7.1	4.6	5.3	4.8	50	500
Barium	108	111	122	132	141	123	1,000	10,000
Beryllium	0.17	0.13	0.14	0.27	0.28	0.25	7.5	75
Cadmium	< 0.15	< 0.15	< 0.15	< 0.15	< 0.15	<0.15	10	10 0
Chromium (1)	12	14	24	15	14	12	5,600	2,500
Cobalt	8.3	7.9	11	17	7.2	6.6	800	8,000
Copper	15	30	41	15	13	12	250	2,500
Lead	8.3	16	85	5.4	5.2	5.4	50	1,000
Mercury	< 0.10	< 0.10	<0.10	< 0.10	<0.10	<0.10	2	20
Molyhdenum	0.51	0.68	0.73	0.32	0.33	0.30	3,500	3,500
Nickel	20	21	28	25	18	15	200	2,000
Selenium	1.3	1.4	1.5	0.97	0.98	1.1	10	100
Silver	< 0.05	< 0.05	<0.05	< 0.05	<0.05	< 0.05	50	500
Thallium	2.9	3.2	3.8	2.4	2.3	2.1	70	70 0
Vanadium	19	28	34	19	23	20	240	2,400
Zinc	29	66	78	29	23	24	2,500	5,000

Notes:	B1-3	
	L	Sample depth in feet below surface grade.
	L	— Boring identification.
	Dup	= Analysis was duplicated by laboratory.
	<	= Less than laboratory detection limits.
	10 X STLC	= Ten times the Soluble Threshold Limit Concentration.
	TTLC	= Total Threshold Limit Concentration. If the concentration of a toxic substance
		in a waste exceeds TTLC, then the waste is considered hazardous
		(California Code of Regulations, Title 22, 66206).
	(I)	= Listed TTLC and 10 x STLC is for total chromium.
		For chromium (VI) TTLC and 10 x STLC are 500 and 50 respectively

TABLE 1 (continued) SUMMARY OF SOIL ANALYTICAL RESULTS - TITLE 22 METALS BENICIA/MARTINEZ BRIDGE CALTRANS TASK ORDER NO. 04-044011-01

SAMPLE I.D	B7-1	B7-1Dup	B7-3	B7-5	B8-1	B8-3	B8-5	B9 -1	B9-3	10XSTLC	TTLC
ANALYTE	Results in milligrams per kilogram (mg/kg)										
Antimony	0.75	0.79	0.74	0.48	0.64	0.75	0.76	0.64	0.73	150	500
Arsenic	4.2	4.3	6.1	3.2	4.7	7.2	5.7	5.1	5.4	50	500
Barium	111	111	123	102	184	242	183	225	304	1,000	10,000
Beryllium	<0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	< 0.05	7.5	75
Cadmium	< 0.15	< 0.15	< 0.15	<0.15	< 0.15	<0.15	<0.15	< 0.15	<0.15	10	100
Chromium (1)	24	23	33	25	26	33	30	30	38	5,600	2,500
Cobalt	11	11	14	12	15	15	15	15	17	800	8,000
Copper	31	31	37	27	38	53	39	48	60	250	2,500
Lead	34	34	2.7	3.0	40	7.1	8.2	66	26	50	1,000
Mercury	< 0.10	< 0.10	<0.10	< 0.10	0.11	<0.10	< 0.10	< 0.10	< 0.10	2	20
Molybdenum	1.2	1.2	1.6	0.94	1.3	1.4	1.2	1.1	1.3	3,500	3,500
Nickel	25	25	30	25	30	46	35	40	48	200	2,000
Selenium	0.43	0,54	1.1	0.26	<0.25	<0.25	<0.25	<0.25	<0.25	10	100
Silver	< 0.05	<0.05	<0.05	<0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	50	500
Thallium	3.9	3.9	4.8	3.5	4.5	6.4	5.8	4.6	5.6	70	700
Vanadium	48	47	55	42	58	54	55	43	49	240	2,400
Zinc	61	60	62	50	93	73	63	91	93	2,500	5,000

Notes: B1-3

-Sample depth in feet below surface grade.

Dup

Boring identification.

= Analysis was duplicated by laboratory.

= Less than laboratory detection limits.

= Ten times the Soluble Threshold Limit Concentration.

10 X STLC TTLC Total Threshold Limit Concentration. If the concentration of a toxic substance in a waste exceeds TTLC, then the waste is considered hazardous (California Code of Regulations, Title 22, 66206).

= Listed TTLC and 10 x STLC is for total chromium.

For chromium (VI), TTLC and 10 x STLC are 500 and 50, respectively.

(1)

SITE INVESTIGATION REPORT

BENICIA/MARTINEZ BRIDGE SEISMIC UPGRADE SOLANO AND CONTRA COSTA COUNTIES, CALIFORNIA



GEOCON

GEOTECHNICAL & ENVIRONMENTAL

CONSULTANTS

PREPARED FOR

CALIFORNIA DEPARTMENT OF TRANSPORTATION DISTRICT 4

OAKLAND, CALIFORNIA

TASK ORDER NO. 04-161901-01 GEOCON PROJECT NO. S8130-06-33

AUGUST 1997

TABLE 2 SUMMARY OF SOIL ANALYTICAL RESULTS PETROLEUM HYDROCARBONS, pH AND SOLUBLE LEAD BENICIA/MARTINEZ BRIDGE CALTRANS TASK ORDER NO. 04-044011-01

						ETHYL-	TOTAL	WET	DI-WET
SAMPLE	pΗ	ТРНа	TPHg	BENZENE	TOLUENE	BENZENE	XYLENES	LEAD	LEAD
I.D.		(ing/kg)	(mg/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(mg/l)	(mg/l)
B1-1	4.25	13	< \	<1	<1	<1	<1		
B1-3		67	<1	<1	<1	<1	<1		
B1-5		3.5	<1	<1	<1	<1	<1		
B1-10		12	<1	<j< td=""><td><1</td><td><1</td><td><]</td><td>*</td><td></td></j<>	<1	<1	<]	*	
B2-1	7.06	5.1	<1	<1	<1	<1	<1		
B2-3		3.6	<1	<1	<1	<1	<1		
B2-5		4.4	<1	<1	<1	<1	<1		
B2-10		3.4	<1	<1	<1	<1	<1	**-	
B2-10 Dup		2.9	<1	<1	<1	<1	< 1		44.6
B2-15		4.3	<]	<1	<1	<1	<1		
B3-1	8.32	5.6	<1	<1	<1	<1	<1		
B3-3		5.8	<1	< j	<1	<]	<1	8.3	< 0.15
B3-5		7.4	<1	<1	<1	<1	<1	***	***
B3-10		5.2	<1	<1	<1	<1	<1		
B3-12		3.8	<1	<1	<1	<1	<1		
B3-12 Dup		3.4	<1	<]	<1	<1	<1		
B4-I	8.36	25	<1	<1	<1	<1	<1	***	
B4-3		35	<1	<1	<1	<1	<1		
B4-5		17	<1	<1	<1	<1	<1		
B4-7		64	<1	<1	< 1	<1	<1	 -	***
B 5 -1	7.86	60	<1	<1	<1	<1	<1		
B5-3		46	<1	<1	<1	<1	<1		***
B5-5	***	15	<1	<1	<1	<1	<1		
136-1	8.25	16	<1	<1	<1	<1	<1	4.4	***
B6-3		12	<1	<1	<1	<1	<1		
B6-3 Dup		12	<1	<1	<1	<1	<1		
B6-5		12	<1	< <u>1</u>	<1	<1	<1		
B7-1	8.22	***				***			
B8-1	8.32				u				die derny

TABLE 2 (continued) SUMMARY OF SOIL ANALYTICAL RESULTS PETROLEUM HYDROCARBONS, PH AND SOLUBLE LEAD BENICIA/MARTINEZ BRIDGE

CALTRANS TASK	ORDER NO	O. 04-044011-0	ÚΙ

SAMPLE I,D.	Hq	TPHd (mg/kg)	TPHg (mg/kg)	BENZENE (ug/kg)	TOLUENE (ug/kg)	ETHYL- BENZENE (ug/kg)	TOTAL XYLENES (ug/kg)	WET LEAD (mg/l)	DI-WET LEAD (mg/l)
B9-1	8.52							3.9	
B9-1Dup				Press				4.0	
B9-3	8.31	***						4.0	
B9-3Dup	8.25								

Notes	mg/kg	= Milligrams per kilogram
	ug/kg	
		= Micrograms per kilogram
	mg/l	= Milligrams per liter
	TPHd	 Total petroleum hydrocarbons as diesel
	TPHg	 Total petroleum hydrocarbons as gasoline
	WET	= Waste Extraction Test using sodium citrate extract
	DI-WET	= Waste Extraction Test using deionized water extract
	<	= Less than laboratory method detection limits
		= Not tested
	Dup	= Analysis was duplicated by laboratory
	B1-1	y are the superior of montaining
	ļ	Sample depth in feet below surface grade
	L	- Boring identification

TABLE 1 SUMMARY OF SOIL ANALYTICAL RESULTS - TOTAL AND SOLUBLE LEAD BENICIA/MARTINEZ BRIDGE SEISMIC UPGRADE CALTRANS TASK ORDER NO. 04-161901-01

SAMPLE I.D.	рН	TOTAL LEAD (mg/kg)	STLC LEAD (mg/l)	CLP LEAD (mg/l)
B1-0	pa Nobe	24		Market byle
B[-!	7.04	44	-	***
B1-2		42		nton na
B1-3		43		
B1-5		35		***
B1-10		40		
B1-12		36		
B2-0	***	108	***	<0.15
B2-1	8.30	43	***	
B2-2		91	3.8	< 0.15
B2-3		570	192	5.9
B2-5		32	787	-m-
B2-10	***	45		444
B2-12		36		740
B3-0		64	2.5	0.21
B3-1		72	2.9	< 0.15
B3-2	7.75	43	- T-p	
B3-3		52	0.63	< 0.15
B3-5		27		
B3-10	****	27		+
B4-0		91	3.2	<0.13
B4-1		94	5.1	< 0.15
B4-2	7.75	98	2.0	<0.15
B4-3		138	25	0.25
B4-15	***	40		
B5-0	***	91	2.5	< 0.15
B5-1	7.82	55	2.3	<0.15
B5-2		21		
B5-3	-	32	***	
B5-5		28		
B5-10		41		
B5-13		32	***	
B6-0		61	0.56	<0.15
B6-1	7.55	211	0.68	< 0.15
B6-2		234	13	< 0.15
B6-3		53	1.1	< 0.15
B6-5	***	28	***	***
B6-10	****	28		
B6-15		26		

TABLE 1 SUMMARY OF SOIL ANALYTICAL RESULTS - TOTAL AND SOLUBLE LEAD BENICIA/MARTINEZ BRIDGE SEISMIC UPGRADE CALTRANS TASK ORDER NO. 04-161901-01

SAMPLE I.D.	рН	TOTAL LEAD (mg/kg)	STLC LEAD (mg/l)	TCLP LEAD (mg/l)
B7-0	200	32		
B7-1		21	***	
B7-2		45	FFF	
B7-3	7.25	27	Annyl na	Man.
B7-5		27		Man-
B7-10		27	e-reside	
B7-15		39		
B8-0		48	***	
B8-1		18		
B8-2		74	4.4	<0.15
B8-3		62	1.0	<0.15
B8-5	8.82	48	er n to the state of the state	·0.15
B8-8	***	30		***
B9-0		30	g nine	oping site.
B9-1	8.63	31	er-mark	
B9-2		24		****
B9-3		35		***
B9-5		36	19.44-9	
B9-7		26	~ ~	
B10-0		76	6.5	0.17
B10-1	8.18	78	12	< 0.15
B10-2		10	==-	
B10-3		28		
B10-5		20		***
B10A-7	***	26	***	
B11-0	Marie	20	****	7.77
B11-1	8.74	17	***	
B11-2		206	4.4	<0.15
B11-3		265	18	<0.15
B11-5	***	14		***
B11-7		25		
B12-0	***	32		***
B12-1		101	3.8	<0.15
B12-2		64	0.77	<0.15
B12-3	7.93	36	V. / /	~0.15
B12-5	7.75	49		***
B12-9	***	23		
B13-0		37		
B13-1	,	54	1.1	0.17
B13-2		54 8 9	3.9	<0.15
1313-7		07	J. J	~v.13

TABLE 1 SUMMARY OF SOIL ANALYTICAL RESULTS - TOTAL AND SOLUBLE LEAD BENICIA/MARTINEZ BRIDGE SEISMIC UPGRADE CALTRANS TASK ORDER NO. 04-161901-01

SAMPLE I.D.	pН	TOTAL LEAD (mg/kg)	STLC LEAD (mg/l)	TCLP LEAD (mg/l)
B13-3		59	2.6	<0.15
B13-5	8.53	30		~0.15
B13-8		8.1		
B14-0		55	0.46	<0.15
B14-1	8.46	16		
B14-2		24		
B14-3		26		
B14-5	***	22		
B15-0		48		
B15-1	8.62	142	2.1	< 0.15
B15-2		52	0.56	<0.15
B15-3		31		
B15-5	n==	24	A	***
B16-0		87	0.95	<0.15
B16-1		148	4.6	<0.15
B16-2	8.50	46	0.59	< 0.15
B16-3	~~~	35		
B16A-0	near ng	62	1.3	<0.15
B16A-1		106	1.2	< 0.15
B16A-2		202	0.75	<0.15
B16A-3		85	<0.15	< 0.15
B16A-5	8.62	76	0.35	< 0.15
B16A-7		92	<0.15	<0.15
B17-0		318	13	0.21
B17-1		660	11	< 0.15
B17-2		266	16	< 0.15
B17-3		460	18	1.1
B17-5	****	788	130	0.70
B18-0	at 2004	82	5.4	0.17
B18-1		45		
B18-2	n	114	1.1	< 0.15
B18-3		38		
B18-5		32		
B19-0		74	5.1	<0.15
B19-1		16	-	
B19-2		14		
B19-3		15		***
B19-5		5.6	***	***

TABLE I SUMMARY OF SOIL ANALYTICAL RESULTS - TOTAL AND SOLUBLE LEAD BENICIA/MARTINEZ BRIDGE SEISMIC UPGRADE CALTRANS TASK ORDER NO. 04-161901-01

SAMPLE I.D.	рН	TOTAL LEAD (mg/kg)	STLC LEAD (mg/i)	TCLP LEAD (mg/l)
B20-0		55	0.70	<0.15
B20-1	-	32	0.70	~0.13
B20-2		17		
B20-3		139	0.25	< 0.15
B20-4		34		
B21-0		6.7		
B21-1		12		4-4
B21-2		9	#41p	
B22-0	*	7.2	***	
B22-1		9.3		
B22-2		6.4	***	***
B22-3		64	0.38	< 0.15

Notes:

B1-I

STLC TCLP = Soluble Threshold Limit Concentration (WET) = Toxicity Characteristic Leaching Potential = Milligrams per kilogram
= Milligrams per liter
= Less than laboratory method detection limit mg/kg mg/l

-Sample depth in feet below surface grade -Boring identification

= Not analyzed

TABLE 2 SUMMARY OF SOIL ANALYTICAL RESULTS - TITLE 22 METALS BENICIA/MARTINEZ BRIDGE SEISMIC UPGRADE CALTRANS TASK ORDER NO. 04-161901-01

SAMPLE LD.	COMP A	COMP B	COMP C	COMP D	СОМР Е	10XSTLC	TTLC
ANALYTE			Results in milli	grams per kilogra	m (mg/kg)		
Antimony	0.57	0.58	0.70	0.33	<0.25	150	500
Arsenic	2.8	4.2	4.8	3.7	1.5	50	500
Barium	82	98	123	115	19	1,000	10,000
Beryllium	< 0.05	< 0.05	<0.05	< 0.05	< 0.05	7.5	75
Cadmium	< 0.15	< 0.15	<0.15	< 0.15	< 0.15	10	100
Chromium (1)	27	24	27	15	3.1	5,600	2,500
Cobalt	10	9.4	11	7.0	1.6	800	8,000
Copper	26	37	33	21	12	250	2,500
Lead	8.7	24	44	10	8	50	1,000
Mercury	<0.10	< 0.10	< 0.10	<0.10	<0.10	2	20
Molybdenum	0.89	0.72	0.55	0.71	<0.25	3,500	3,500
Nickel	31	29	35	31	4.8	200	2,000
Selenium	0.56	0.46	<0.25	< 0.25	< 0.25	10	100
Silver	<0.05	<0.05	<0.05	<0.05	< 0.05	50	500
Thallium	2.0	2.1	2.2	2.0	0.49	70	700
Vanadium	29	34	28	21	3.6	240	2,400
Zinc	49	44	60	38	30	2,500	5,000

Notes:

10 X STLC TTLC

 Less than laboratory method detection limits.
 Ten times the Soluble Threshold Limit Concentration.
 Total Threshold Limit Concentration. If the concentration of a toxic substance in a waste exceeds TTLC, then the waste is considered hazardous (California Code of Regulations, Title 22, 66206).

= Listed TTLC and 10 x STLC is for total chromium.

= Boring B1 composite samples

= Boring B5 composite samples

(1) COMP A COMP B COMP C = Boring B6 composite samples

COMP D = Boring B9 composite samples = Boring B12 composite samples COMP E

TABLE 3 SUMMARY OF SOIL ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS BENICIA/MARTINEZ BRIDGE SEISMIC UPGRADE CALTRANS TASK ORDER NO. 04-161901-01

SAMPLE ID	TPHg (mg/kg)	TPHd (mg/kg)	BENZENE (ug/kg)	TOLUENE (ug/kg)	ETHYLBENZENE (ug/kg)	TOTAL XYLENES (ug/kg)
B7-10	9.5	1,170	<5	<5	<5	36
B7-15	1.5	572	<5	<5	<5	<5

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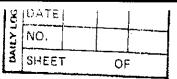
 Total petroleum hydrocarbons as gasoline
 Total petroleum hydrocarbons as diesel
 Milligrams per kilogram
 Micrograms per kilogram
 Less than the laboratory method detection limit TPHg TPHd

mg/kg ug/kg

B7-10

--Sample depth in feet below surface grade - Boring identification

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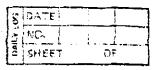
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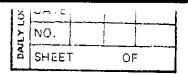
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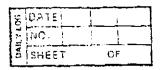
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SAMPLING AND ANALYSIS WORKPLAN

BENICIA-MARTINEZ BRIDGE RETROFIT

Prepared by:

Received

Department of Transportation Division of Toll Ending Frogram Martinez Field Office

INTRODUCTION

Soil from structural excavations within the project limits may contain levels of chemical constituents that are hazardous and may be regulated under the Resource Conservation and Recovery Act. (RCRA) as defined in the California Code of Regulations—Title 22. This sampling and analysis workplan will uniformly and representatively quantify these constituents to assure proper and legal disposition of soils generated as a result of the project.

STOCKPILE GENERATION

Soil from each footing shall be excavated and stockpiled according to preliminary sample data and classifications given in the Special Provisions. The stockpiles will be developed in an elongated shape such that soil from the top of the excavation shall be stockpiled to the rear and the soil from the bottom of the excavation shall be at the front of the stockpile. This will assure that soil from each depth will be represented. The soils will be generated and stockpiled in accordance with the Special Provisions and applicable laws and regulations.

SAMPLING PROCEDURES

Samples will be collected using the following protocol:

- (1) Each stockpile will be divided into four sectors, each transecting the stockpile from side to side and representing no more than 200 cubic yards (cy) for each stockpile.
- (2) Sampling equipment and containers will be triple rinsed with Alconox prior to use and final rinsed with de-ionized water.
- (3) Samples will be collected at a minimum rate of one sample per 50 cy of soil.
- (4) Samples will be collected at random depths by digging approximately 0 to 2 feet, with a pre-cleaned shovel, into the middle of each sector of the stockpile. Samples will be collected in pre-cleaned brass tubes by either pounding with a hammer or hand-pushing into the soil.
- (5) Each sample container will be filled to capacity to minimize the presence of headspace and sealed with Teflon tape and tight-fitting plastic caps. After sample collection is complete, each sample container will be labeled with a unique sample number, location, time of collection, initials of collector, date and any other pertinent information.
- (6) Each sample will be recorded on a chain-of-custody form that will also indicate the compositing protocol. A sample number will be assigned to identify the stockpile and the quadrant where the sample originated.
- (7) All samples collected during a given day will be placed on ice in an ice chest and delivered within 24 hours to a state certified laboratory for analysis. Sample containers will be pre-chilled prior to collection of soil samples.

<u>ANALYSIS</u>

Every four samples from each stockpile will be composited by the laboratory into one composite sample for analysis. Each composite sample will be analyzed for total recoverable petroleum hydrocarbons (TRPH) as diesel and motor oil [EPA Method 8015mod.], TPH gasoline/BTEX [EPA 8020], and Title 22 [CAM 17 metals]. Total concentrations that exceed a value of 10 times the soluble threshold limit concentration [STLC] shall be analyzed under a waste extraction test. Any subsequent results that exceed STLC values, shall be analyzed under a Total Characteristic Leaching Procedure [TCLP]. Additional sampling and analysis will be performed upon request by the designated disposal facility.

LABORATORY

Chromalab, Inc., a California Certified Laboratory, will perform the analysis. Lab address is:

Chromalab, Inc. 1220 Quarry Lane Pleasanton, California 94566

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	or "No" or "f	VA" if not app		
YES	NO	NA		·
			1.	Has there been an absence of rain since the last inspection?
	-		2.	Are all sandbags, straw bales, and silt fences in-place in accordance with the WPCP or SWPPP and are they functioning properly?
		***	3.	If present, are all significant erodible slopes protected from erosion through the implementation of acceptable soil stabilization practices?
		<u></u>	4.	If present, are all sediment traps/basins functioning properly?
			5.	Are all material handling and storage areas reasonably clean and free of spills, leaks, or other deleterious materials?
	 -		6.	Are all equipment storage and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious materials?
			7.	Are all materials and equipment properly covered?
			. 8.	Are all discharge points reasonably free of any noticeable pollutant discharges?
			9.	Are all discharge points reasonably free of any significant erosion or sedimentransport?
			10.	Are all BMPs identified on the WPCP or SWPPP installed in the proper location and according to the specifications for the plan?
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			12.	Are all on-site traffic routes, parking, and storage of equipment and supplies restricted to areas designated in the WPCP or SWPPP for those uses?
	·		13.	Are all locations of temporary soil stockpiles or construction materials in approve areas?
			14.	Are all seeded or landscaped areas properly maintained?
<u>.</u>		-	15. •	Are sediment controls in place at discharge points from the site?
	Marris Marris	-	16.	Are slopes free of significant erosion?
·			17.	is sediment, debris, or mud being cleaned from public roads at intersections with site access roads?
		•	18.	Does the WPCP or SWPPP reflect current site conditions?
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STORM WATER CONTROLS INSPECTION REPORT

PROJ	ECT:	Construction Activities	
		Seismic Retrofit	
		Benicia-Martinez Bridge	DATE
CONT	RACTOR:		
	•		**************************************
	RACTOR'S		TIME
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TIMING	OF INSPECTION (check one)	
	. Before a for	ecast storm event	•
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	SWPPP and fund	and/or straw bales in place in accordance with the e	rosion control plan or the
·	2. Are all exposed a stabilization pract	slopes protected from erosion through the implementations (September 15 - May 1)?	ation of acceptable soil
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· · · · ·	protected from cor	ament receptacles free of leaks? Are the contents of ning into contact with storm water or from coming dis nt receptacles filled at or beyond capacity?	
1	0. Are paved areas	ree of tracked sediment?	
1	1. Are there any other	er potential water pollution concerns at the site?	•
e proble:	n and when the corre	he above questions, describe any corrective action tective action tective action is to be completed.	hat must be taken to remedy
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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION

ORDER NO. 94-098 NPDES PERMIT NO. CAS029998

WASTE DISCHARGE REQUIREMENTS FOR:

STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, DISTRICT 4 AND DISTRICT 10, STORM WATER DISCHARGES

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter referred to as the Regional Board) finds that:

- 1. The State of California, Department of Transportation, District 4 and District 10 (hereinafter referred to as Caltrans or the Discharger) has submitted a permit application package, dated July 20, 1993, for issuance of Waste Discharge Requirements under the National Pollutant Discharge Elimination System (NPDES).
- 2. The permit application included a proposed Storm Water Management Plan (Plan) which describes a framework for managing discharges of storm water from Caltransowned right-of-way and facilities within the jurisdiction of the Regional Board. (The jurisdiction of the Regional Board is hereinafter referred to as the San Francisco Bay Region.) The Plan presents current and planned management practices that Caltrans is implementing.
- 3. Discharges consist of storm water runoff non-storm water runoff generated from construction, maintenance, and operation of state-owned conventional highways, expressways, freeways, and related maintenance facilities which discharge directly or through municipal storm drain systems to lakes, water-supply reservoirs, groundwaters, the Pacific Ocean, Central, Lower, and South San Francisco Bay, San Pablo Bay, Suisun Bay, the Delta, or to tributary streams or watercourses and contiguous water bodies in the San Francisco Bay Region.
- 4. Federal regulations for storm water discharges were issued by the US Environmental Protection Agency (USEPA) on November 16, 1990 (40 Code of Federal Regulations (CFR) Parts 122, 123, and 124) pursuant to Section 402(p) of the Clean Water Act (CWA), as amended by the Water Quality Act of 1987. The regulations require NPDES permits for storm water discharges from separate municipal storm drain systems, storm water discharges associated with industrial activity (including construction activities), and designated storm water discharges which are significant contributors of pollutants to waters of the United States.
- 5. The Regional Board amended its Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region on September 16, 1992. The State Water Resources Control Board (hereinafter the State Board) approved the Basin Plan on April 27, 1993.
- 6. The Basin Plan required Caltrans to submit a NPDES permit application for all storm water discharges from Caltrans-owned right-of-way and facilities in the San Francisco Bay Region which includes the design, construction, maintenance, and

operation of highway facilities relative to reducing pollutants in storm water discharges to the maximum extent practicable.

- 7. The Basin Plan lists the following existing beneficial uses for the Pacific Ocean, Central, Lower, and South San Francisco Bay, San Pablo Bay, Suisun Bay, Delta, lakes, water-supply reservoirs, groundwaters, and tributary streams or watercourses and contiguous water bodies within the drainage basin of the San Francisco Bay Region as follows:
 - a. Industrial Service Supply
 - b. Industrial Process Supply (Central Bay only)
 - c. Navigation
 - d. Water Contact Recreation
 - e. Non-contact Water Recreation
 - f. Ocean Commercial and Sport Fishing
 - g. Wildlife Habitat
 - h. Preservation of Rare and Endangered Species
 - i. Fish Migration
 - j. Fish Spawning (Central Bay an existing use; Lower and South Bay a potential use)
 - k. Shellfish Harvesting
 - 1. Estuarine Habitat (Bay only)
 - m. Marine Habitat (Pacific Ocean)
 - n. Municipal and Domestic Supply
 - o. Groundwater Recharge
- 8. The Regional Board has issued NPDES permits for the discharge of storm water from municipal storm drain systems to all municipalities in Alameda, Contra Costa, San Mateo, and Santa Clara counties, and intends to issue such permits to the cities of Fairfield, Suisun City, and Vallejo. Some storm water discharges from Caltransowned right-of-way and facilities discharge to storm drain systems or waterways managed by these municipalities or flood control agencies. Some storm water discharges from these municipalities discharge to storm drain systems or waterways managed by Caltrans.
- 9. The issuance of waste discharge requirements for this discharge are exempt from the provisions of the California Environmental Quality Act (CEQA); Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code in accordance with Section 13389 of the California Water Code and as provided in categorical exemption classes of the CEQA Guidelines (Title 14, California Code of Regulations Sections 15301-15329).
- 10. The Regional Board will notify interested agencies and interested persons of the availability of reports, plans, and schedules submitted in response to requirements of this Order and may provide them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations. The Regional Board will consider all comments and may require modification of the reports, plans, or schedules or may modify this Order accordingly.

11. The Regional Board has notified the Discharger and interested agencies and interested persons of its intent to prescribe waste discharge requirements for this discharge, has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations, at a properly noticed public meeting, heard and considered all comments pertaining to the discharge.

12. This Order serves as a NPDES Permit for discharges of storm water from Caltransowned right-of-way and facilities, including construction projects and maintenance facilities, in the San Francisco Bay region, pursuant to Section 402 of the Clean Water Act, or amendments thereto, and shall become effective ten days after the date of its adoption provided the Regional Administrator, USEPA, has no objections.

IT IS HEREBY ORDERED that Caltrans, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the CWA as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

- 1. Discharges of material other than storm water to a storm drain system or waters of the United States are prohibited. NPDES permitted non-storm water discharges are exempt from this prohibition. The non-storm water discharges listed below need not be prohibited provided such sources are identified and appropriate control measures to minimize the impacts of such sources are developed under the Storm Water Management Plan.
 - a. water line flushing;
 - b. landscape irrigation;
 - c. diverted stream flows;
 - d. rising ground waters;
 - e. uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20));
 - f. uncontaminated pumped groundwater;
 - g. discharges from potable water sources;
 - h. foundation drains:
 - i. air conditioning condensate;
 - j. irrigation water;
 - l. springs;
 - m. water from crawl space pumps;
 - n. footing drains;
 - o. flows from riparian habitats and wetlands; and
 - p. discharges or flows from emergency fire fighting activities.

B. EFFLUENT LIMITATIONS

1. Pollutants in storm water discharges from Caltrans-owned right-of-way and facilities within the San Francisco Bay Region shall be reduced to the maximum extent practicable based on technical and economic factors.

2. Pollutants in storm water discharges from construction activities shall be reduced cr eliminated through implementation of Best Available Technology Economically Achievable for toxic pollutants and Best Conventional Pollutant Control Technology for conventional pollutants.

C. RECEIVING WATER LIMITATIONS

- 1. Discharges shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the State:
 - a. Floating, suspended, or deposited macroscopic particulate matter, or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or
 - e. Toxic or deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
- 2. Discharges shall not cause a violation of any applicable water quality objective for receiving waters contained in the Basin Plan.

D. PROVISIONS

1. Caltrans shall demonstrate compliance with Discharge Prohibition A.l., Effluent Limitations B.1. and B.2., and Receiving Water Limitations C.1. and C.2. through the timely implementation of control measures and other actions to reduce pollutants in discharges to the maximum extent praticable in accordance with its Storm Water Management Plan and any of its modifications, revisions, or amendments and the Provisions of this Order and any of its modifications, revisions, or amendments.

2. Storm Water Management Plan

Caltrans shall implement forthwith its Storm Water Management Plan (Plan) as submitted on July 20, 1993 and submit a revised Plan to the Regional Board and implement such revisions by January 1, 1995 unless otherwise noted below. The Plan is an enforceable component of this Order. The revised Plan shall be acceptable to the Executive Officer and shall include defined actions, responsibilities, and time schedules for both District 4 and District 10. In addition the Plan shall include or describe procedures for implementing the following:

a. Program Management Structure - Description of the program management structure in sufficient detail to provide assurances for full implementation of the Plan in both District 4 and District 10 including defining the responsibilities, functions, relationships, and lines of communication amongst functional offices and branches for implementing the Plan;

b. <u>Legal Authority</u> - Demonstration of adequate legal authority for control of storm water discharges and non-storm water discharges including, but not limited to, the establishment, or ability to establish, interagency agreements, contractor compliance requirements, and appropriate inspection and enforcement authority;

- d. Policies Policies needed to resolve conflicts between implementation of storm water controls and current standard practices and policies;
- e. <u>Inspection Program</u> An inspection program to insure actions are implemented and facilities are constructed, operated, and maintained in accordance with this Order and the Plan that includes training for inspection personnel, documentation for field activities, a reporting system that can be used to track effectiveness of control measures, enforcement procedures (or referral for enforcement) for non-compliance, and responsibilities and responsible personnel of all affected functional offices and branches;
- f. Fiscal Resources Existing and planned funding mechanisms necessary for implementation of the Plan including adequate resources and staff; and
- g. All other plans required by this Order upon submittal to the Regional Board and acceptable to the Executive Officer.

3. Maintenance Operations

Caltrans shall submit a plan to the Regional Board acceptable to the Executive Officer by July 1, 1995 for management of storm water from all maintenance activities and maintenance facilities. The plan shall include or describe procedures for implementing the following:

- a. Maintenance Activities Current practices and policies, including responsibilities and responsible parties for all maintenance activities on Caltrans-owned right-of-way and facilities that may adversely affect storm water discharges and improvements in such practices and policies where improvements will reduce pollutants in storm water discharges;
- b. Road Sweeping The type of equipment used, locations and frequencies, potential improvements in operations to enhance pollutant removal, operational performance standards, methods and locations of waste disposal, and records to be maintained specific to the level of effort, performance, and effectiveness of road sweeping for storm water management;
- c. Storm Drain Inlet, Catch Basin, Storm Drain, and Channel Maintenance Cleaning and clearing methods, frequency of maintenance, justification of maintenance frequency, potential improvements in operations to enhance pollutant removal, methods and locations of waste disposal, and records to be maintained specific to the level of effort, performance, and effectiveness for storm drain inlet, catch basin, storm drain, and channel maintenance; and

d. <u>Vegetation Control</u> - Vegetation maintenance practices to minimize erosion, enhance pollutant removal, and prevent to the maximum extent practicable the discharge of pollutants associated with vegetation maintenance, including a plan to eliminate or minimize the use of chemicals, such as herbicides, in the maintenance of vegetation.

A Vegetation Control Plan for all highway segments in the San Francisco Bay Region shall be submitted to the Executive Officer by April 1 of each year and shall be incorporated into the Storm Water Management Plan. Logs of all chemicals applied shall be maintained. The logs shall list the chemical name, the reason for application, the amount of chemical applied, the specific areas where the chemicals were applied, and the dates of application. A summary of the logs shall be submitted to the Regional Board along with other required annual reports.

A review of the aquatic toxicity data of all herbicides which are applied by Caltrans shall be discussed in the Vegetation Control Plan including a description of how the herbicides are managed and applied to prevent toxicity of storm water discharges and receiving waters.

4. Maintenance Facilities

- a. Caltrans shall submit a report to the Regional Board by January 1, 1995 that lists and describes the functions of all maintenance facilities (maintenance yards or shops) in the San Francisco Bay Region, identifies facilities that are scheduled for reconstruction, upgrade, or other improvements, provides a description of and schedule for such improvements; and identifies maintenance facilities that have the potential to adversely affect receiving water quality.
- b. Storm Water Pollution Prevention Plans shall be prepared and implemented in accordance with the conditions and provisions contained in Appendix A of this Order and submitted to the Executive Officer for review and approval by December 1, 1995 for all maintenance facilities that have the potential to adversely affect receiving water quality in the San Francisco Bay Region. A progress report on the development of Storm Water Pollution Prevention Plans shall be submitted to the Executive Officer by July 1, 1995.

The Storm Water Pollution Prevention Plans shall address activities that are potential sources of pollutants in storm water discharges, including, but not limited to, vehicle and equipment maintenance, cleaning, and fueling practices, and storage and handling of construction materials, roadway repair materials, fertilizers, pesticides, paints, solvents, and other chemicals...

5. Construction Activities

Caltrans shall submit a plan to the Regional Board acceptable to the Executive Officer by January 1, 1995 for management of storm water from construction projects in the San Francisco Bay Region. The plan shall include a method to rank construction projects and construction activities based on their potential to adversely

affect receiving water quality. The plan shall include or describe procedures for implementing the following:

- a. <u>Erosion Control</u> Control measures and other practices that will be implemented to reduce erosion and, to the extent practicable, retain sediment onsite during and after construction, including education of contractors and Caltrans personnel on effective erosion control and prominent inclusion of erosion control requirements in contractor bid packages;
- b. Chemical and Waste Management Construction site chemical and waste control measures including limiting the application, generation, and migration of toxic substances, providing for the proper storage and disposal of toxic materials, construction waste, and equipment waste, and applying nutrients in a manner that will minimize nutrient runoff to surface or ground waters;
- d. <u>Permanent Features</u> Control measures and other practices that will be implemented to reduce pollutants in storm water discharges after construction is completed;
- e. <u>List of Construction Projects</u> A list of construction projects and planned construction judged to potentially cause an adverse water quality impact shall be updated annually and describe for each project the area of disturbed land, its location, expected startup and completion date, responsible Resident Engineer, and contractor(s); and
- f. <u>Training</u> Procedures to ensure Caltrans' personnel and contractors associated with construction projects receive adequate training on storm water control measures.

6. Storm Water Pollution Prevention Plans

Caltrans shall develop and implement, and retain at the site, Storm Water Pollution Prevention Plans for all construction projects which disturb five acres or greater of land area in accordance with the conditions and provisions contained in Appendix B of this Order, and submit them for review by the Executive Officer in accordance with the following time schedule:

- a. By October 1, 1994 for all existing projects which disturb five acres or greater of land area; or
- b. 60 days prior to commencement of construction for all new projects which disturb five acres or greater of land area.

Caltrans is not required to submit Storm Water Pollution Prevention Plans for projects that disturb less than five acres for review at this time but may be required to do so at any time in the future at the request of the Executive Officer.

7. Permanent Control Measures

Caltrans shall submit a plan to the Regional Board acceptable to the Executive Officer by January 1, 1995 for management of storm water from all new or reconstructed facilities once construction is completed. The plan shall include implementation of an appropriate selection of structural and non-structural post-construction control measures to reduce, to the extent practicable, the total suspended solid and other pollutant loadings from the facilities once construction is completed. The plan shall include or describe procedures for implementing the following:

- a. A listing of appropriate control measures, including design, operation, and maintenance specifications, referenced by facility type, location, and other suitable factors; Suitable factors may include prevention and control of erosion and sedimentation, source control of potential pollutants, control and treatment of runoff, spill containment, and protection of wetlands and water quality resources.
- b. An effective operation and maintenance program for permanent control measures;
- c. Consideration of pollution prevention and pollutant removal factors, including spill containment, and corresponding operation and maintenance requirements in the design of facility drainage structures and other features;
- d. Consideration of improved pollution prevention and removal of pollutants in storm water discharges in determining the benefit cost of upgrading hydraulically inadequate facilities and other facilities which provide inadequate or no pollution prevention and pollutant removal benefit;
- e. Development and implementation of policies, programs, procedures, and standards to improve pollutant removal and water quality benefits of landscape design after construction is completed;
- f. Identification of high risk areas, such as locations where spills from Caltransowned right-of-way or facilities can discharge directly to municipal or domestic water supply reservoirs or groundwater percolation facilities, and consideration of appropriate spill containment and spill prevention control measures for these areas; and
- g. A description of how these control measures will be developed, constructed, and maintained by the Environmental Engineering, Project Development, Construction, and Maintenance and other affected functional offices and branches.

8. Non-Storm Water Discharges

Caltrans shall submit a plan to the Regional Board acceptable to the Executive Officer by March 1, 1995 that describes a program and a plan for implementation to prevent, eliminate, or effectively manage non-storm water discharges which occur or

may occur on Caltrans-owned right-of-way or facilities. The plan shall include or describe procedures for implementing the following:

- a. <u>Illicit Discharges</u> Mechanisms for controlling illegal dumping including outreach, inspection, training, and enforcement referral;
- b. <u>Accidental Discharges</u> Mechanisms for responding to accidental discharges including identifying responsible parties for initiating immediate cleanup actions, establishing cleanup procedures, notifying appropriate agencies, training employees to identify and react to accidental discharge situations, ensuring that properly credentialed contractors are hired for cleanup, and establishing procedures for monitoring, record management, and reports;
- c. Non-Prohibited Discharges Identification and description of categories of discharges of the non-prohibited types listed in Prohibition A.1, and for each category, identification and description of appropriate control measures and management practices, procedures for notifying the Regional Board and affected municipal storm water management agencies of these discharges as necessary and appropriate to the category, and procedures for monitoring and record management as necessary and appropriate to the category; and
- d. Other Discharges Identification and description of other discharges associated with maintenance activities, maintenance facilities, or construction activities, including vehicle and equipment washwater discharges and discharges associated with waste disposal, discharges associated with cutting (saw-cut slurry), repair, and replacement of paved surfaces, and an implementation schedule for their elimination and prevention or effective management.

9. Highway Operations

Caltrans shall submit a plan to the Regional Board acceptable to the Executive Officer by January 1, 1995 that describes how reduction in pollutants in storm water discharges and improvements in storm water quality will be considered as part of highway operations and ongoing efforts to enhance traffic flow and to eliminate or reduce traffic congestion.

10. Local Agencies

Caltrans shall submit a plan to the Regional Board acceptable to the Executive Officer by November 1, 1994 that describes communication, coordination, cooperation, and collaboration of Caltrans' storm water management and other pertinent activities with municipal storm water management programs including establishing agreements or policies with municipalities, flood control departments, or districts as necessary or appropriate.

11. Public Information

Caltrans shall submit a plan to the Regional Board acceptable to the Executive Officer by January 1, 1995 for development and implementation of a Public Information Program that includes education of the general public, Caltrans' employees and contractors, and commercial and industrial entities whose actions may impair storm water quality discharged from Caltrans-owned right-of-way and facilities. Specific areas of action that shall be addressed include prevention of illegal discharges and the water quality benefits of minimizing or reducing traffic congestion through increased use of high occupancy vehicle lanes and alternative modes of transportation.

12. Copper Reduction

Caltrans shall submit a plan to the Regional Board by April 1, 1995 acceptable to the Executive Officer which identifies control measures for copper and assigns responsibilities and time schedules for implementation of the control measures designed to reduce annual copper mass loads in its storm water discharges which will attain applicable water quality objectives. Such control measures shall be identified and implemented in cooperation with local agencies.

In exercising approval authority, the Executive Officer shall ensure that the level of effort represented by the control measures and implementation schedule contained in the plan is substantially equivalent to the copper reduction efforts being undertaken by municipal storm water management agencies located in geographic areas addressed in the plan.

13. Monitoring Program

Caltrans shall submit to the Regional Board by November 1, 1994 a Monitoring Program Plan acceptable to the Executive Officer that demonstrates the effectiveness of its Storm Water Management Plan and specifically achieves the following objectives:

- a. Characterization of storm water discharges, including pollutant concentrations and mass loadings, from locations representative of Caltrans-owned right-of-way and facilities within the San Francisco Bay Region;
- b. Evaluation of effectiveness of construction erosion control measures;
- c. Evaluation of effectiveness of permanent control measures;
- d. Evaluation of effectiveness of maintenance activities control measures;
- e. Evaluation of effectiveness of maintenance facility Storm Water Pollution Prevention Plans; and
- f. Evaluation of effectiveness of highway operation control measures.

The Monitoring Program Plan shall identify and justify sampling locations, frequencies, and methods, suite of pollutants to be analyzed, analytical methods, and quality assurance procedures. Alternative monitoring methods (special projects, literature review, visual observations, use of indicator parameters, etc.) may be proposed with justification.

The Executive Officer is authorized to require additional monitoring and reporting by Caltrans when additional information is needed to assess existing or potential adverse impacts by storm water discharges, to evaluate effectiveness of storm water pollution prevention or control measures, or to demonstrate compliance with permit requirements.

14. Annual Reports

Caltrans shall submit to the Regional Board by February 1 of each year a Mid-Year Summary Report and by August 1 of each year an Annual Report.

The Mid-Year Summary Report shall be a progress report on the status of implementation of the Storm Water Management Plan activities and actions, problems encountered, and proposed solutions.

The Annual Report shall be a detailed report on the status of implementation of the Storm Water Management Plan (Plan) and include an evaluation of the effectiveness of the control measures, management practices, and other actions and activities described in the Plan. Measures of effectiveness include, but are not limited to, quantitative monitoring to assess the effectiveness of control measures, detailed accounting of program accomplishments, funds expended, and staff hours utilized. The annual report shall provide an overall evaluation of the Plan and set forth plans and schedule of implementation for the upcoming year. The annual report may also include proposed modifications or revisions to the Plan.

By May 1 of each year, Caltrans shall submit a report outlining the format for the upcoming annual report. This report shall contain information on how, and to what detail, Plan status will be reported.

15. It is anticipated that the Storm Water Management Plan may need to be modified, revised, or amended from time to time to respond to changed conditions and to incorporate more effective approaches to pollutant control. Requests for changes may be initiated by the Regional Board's Executive Officer or by Caltrans. Minor changes may be made with the Executive Officer's approval and will be brought to the Regional Board as information items. Such proposed changes shall be submitted to the Regional Board as technical reports as needed. If proposed changes imply a major amendment in the overall scope of effort, such changes would be brought before the Regional Board as permit amendments.

16. This Order may be modified, or alternately, revoked or reissued, prior to the expiration date as follows:

- a. to address changed conditions identified in the required technical reports or other sources deemed significant by the Regional Board;
- b. to incorporate applicable requirements of statewide water quality control plans adopted by the State Board or amendments to the Basin Plan; or
- c. to comply with any applicable requirements, guidelines, or regulations issued or approved under Section 402(p) of the CWA, if the requirement, guideline, or regulation so issued or approved contains different conditions or additional requirements not provided for in this Order. The Order as modified or reissued under this paragraph shall also contain any other requirements of the CWA then applicable.
- 17. Caltrans shall comply with all parts of the Standard Provisions contained in Appendix C of this Order.
- 18. This Order expires on August 27, 1999. Caltrans must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for reissuance of waste discharge requirements.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on August 17, 1994.

Steven R. Ritchie Executive Officer

- APPENDIX A MAINTENANCE FACILITY STORM WATER POLLUTION PREVENTION PLAN PROVISIONS
- APPENDIX B CONSTRUCTION PROJECT STORM WATER POLLUTION PREVENTION PLAN PROVISIONS
- APPENDIX C STANDARD PROVISIONS

ATTACHMENT - TITLE PAGE, TABLE OF CONTENTS, CALTRANS STORM WATER MANAGEMENT PLAN

STORM WATER MANAGEMENT PLAN

FOR

CALTRANS DISTRICT - 04

DEPARTMENT OF TRANSPORTATION

STATE OF CALIFORNIA

JULY 1993

APPROVED BY:

Preston W. Kelley

Date

District Director

APPROVAL RECOMMENDED BY:

Joe B Browne

Deputy District Director - Construction

Harry Y. Yahata

Deputy District Director - P/D Support

Glenn E. Behm

Deputy District Director - Maintenance

Paul H. Hensley

Deputy District Director - Operations

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APPENDIX A

MAINTENANCE FACILITY STORM WATER POLLUTION PREVENTION PLAN PROVISIONS

- 1. Objectives. A Storm Water Pollution Prevention Plan (SWPP Plan) shall be developed and implemented, and amended when necessary, to meet the following objectives:
 - a. to identify pollutant sources that may affect the quality of industrial storm water discharges; and
 - b. to identify, assign, and implement control measures and management practices to reduce pollutants in industrial storm water discharges.
- 2. Availability. The SWPP Plan shall be kept at the facility and made available upon request of a representative of the Regional Board and/or local agency.

3. Required Changes.

- a. Caltrans shall amend the SWPP Plan whenever there is a change in design, construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to surface waters, ground water, or a municipal separate storm sewer system. The SWPP Plan should also be amended if it is in violation of any condition this permit or has not achieved the general objective of reducing pollutants in storm water discharges.
- b. The Regional Board, or local agency with the concurrence of the Regional Board, may require the discharger to amend the SWPP Plan.
- 4. Source Identification. The SWPP Plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from the facility. The SWPP Plan shall include, at a minimum, the following items:
 - a. A topographic map (or other acceptable map if a topographic map is unavailable), extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies (including springs and wells), and the discharge point where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.

b. A site map showing:

- i. Storm water conveyance, drainage, and discharge structures;
- ii. An outline of the storm water drainage areas for each storm water discharge point;
- iii. Paved areas and buildings;
- iv. Areas of pollutant contact with storm water or release to storm water, actual or potential, including but not limited to outdoor storage, manufacturing, and process

areas, material loading, unloading, storage, and access areas, and waste treatment, storage, and disposal areas;

- v. Location of existing storm water structural control measures (i.e., berms, coverings, etc.);
- vi. Surface water locations, including springs and wetlands;
- vii. Areas of existing and potential soil erosion;
- viii. Vehicle service areas;
 - ix. Location of each well where fluids from the facility are injected underground.
- c. A narrative description of the following:
 - i. Significant materials that have been treated, stored, disposed, spilled, or leaked in significant quantities in storm water discharge after November 19, 1988;
 - ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharge;
 - iii. Material loading, unloading, and access areas;
 - iv. Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharge;
 - v. Industrial storm water discharge treatment facilities (if any);
 - vi. Methods of onsite storage and disposal of significant materials;
 - vii. Outdoor storage, manufacturing, and processing activities including activities that generate significant quantities of dust or particulates.
 - d. A list of pollutants that have a reasonable potential to be present in storm water discharge in significant quantities, and an estimate of the annual quantities of these pollutants in industrial storm water discharge.
 - e. An estimate of the size of the facility (in acres or square feet), and the percent of the facility that has impervious areas (i.e., pavement, buildings, etc.).
 - f. A list of significant spills or leaks of toxic or hazardous pollutants to storm water that have occurred after November 19, 1988. This shall include:
 - i. Toxic chemicals (listed in 40 CFR 372) that have been discharged to storm water as reported on EPA Form R;
 - ii. Oil or hazardous substances in excess of reportable quantities (see 40 CFR 110, 117 or 302).

- g. A summary of existing sampling data (if any) describing pollutants in industrial storm water discharges.
- 5. Storm Water Management Controls. The SWPP Plan shall describe the storm water management controls appropriate for the facility and a time schedule for fully implementing such controls. The appropriateness and priorities of controls in the SWPP Plan shall reflect identified potential sources of pollutants. The description of storm water management controls shall include, as appropriate:
 - a. Storm Water Pollution Prevention Personnel. Identify specific individuals (and job titles) who are responsible for developing, implementing, and revising the Plan.
 - b. <u>Preventive Maintenance</u>. Preventive maintenance involves inspection and maintenance of storm water conveyance system devices (i.e., oil/water separators, catch basins, etc.) and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water. Maintenance schedules including inspection and testing for failure shall be established;
 - c. Good Housekeeping. Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.
 - d. Spill Prevention and Response. Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, clean up equipment and procedures should be identified, as appropriate. The necessary equipment to implement a clean-up shall be available and personnel trained in proper response, containment and cleanup of spills. Internal reporting procedures for spills of significant materials shall be established.
 - e. Source Control. Source controls, such as elimination or reduction of the use of toxic pollutants, covering of pollutant areas, sweeping of paved areas, containment of potential pollutants, labelling all storm drain inlets with "No Dumping" signs, isolation/separation of industrial from non-industrial pollutant sources so that runoff from these areas does not mix, etc.;
 - f. Storm Water Management Practices. Storm water management practices are practices other than those which control the source of pollutants. They include treatment/conveyance structures such as drop inlets, channels, retention/detention basins, treatment vaults, infiltration galleries, filters, oil/water separators etc. Based on assessment of the potential of various sources to contribute pollutants to storm water discharges in significant quantities, additional storm water management practices to remove pollutants from storm water discharge shall be implemented and design criteria shall be described.
 - g. Sediment and Erosion Prevention. Measures to limit erosion around the storm water drainage and discharge points such as riprap, revegetation, slope stabilization, etc. shall be described and implemented;

h. Employee Training. Employee training programs shall inform all personnel responsible for implementing the SWPP Plan. Training should address spill response, good housekeeping, and material management practices. Periodic dates for training shall be identified.

- i. <u>Inspections</u>. All inspections shall be done by trained personnel. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering storm water discharges. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded. Inspection records shall be retained for five years.
- j. Records A tracking and followup procedure shall be described to ensure that adequate response and corrective actions have been taken in response to inspections. Records of inspections shall be maintained. Establishment of internal record keeping and internal reporting procedures of inspections and spill incidents.
- 6. Non-Storm Water Discharges. The SWPP Plan shall include a certification that non-storm water discharges have been eliminated and a description of any tests for the presence of non-storm water discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Such certification may not always be feasible if a) significant structural changes are necessary to eliminate the discharge of non-storm water discharges, or b) a NPDES permit has been applied for, but not yet received, for the non-storm water discharges. In such cases, the discharger must notify the Regional Board and local agencies having jurisdiction over storm water systems or water courses which receive the non-storm water discharge prior to implementation of the SWPP Plan that non-storm water discharges cannot be eliminated. The notification shall include justification for a time extension and a schedule, subject to modification by the Regional Board, indicating when non-storm water discharges will be eliminated. In no case shall the elimination of non-storm water discharges exceed July 1, 1995.
- 7. Annual Inspection. An annual facility inspection shall be conducted to verify that all elements of the SWPP Plan (i.e., site map, potential pollutant sources, structural and non-structural controls to reduce pollutants in industrial storm water discharge, etc.) are accurate. A report of the annual inspection and observations that require a response (and the appropriate response to the observation) shall be retained as part of the SWPP Plan.
- 8. Other Plans. This SWPP Plan may incorporate, by reference, the appropriate elements of other program requirements (i.e., Spill Prevention Control and Countermeasures (SPCC) plans under Section 311 of the CWA, Best Management Programs under 40 CFR 125.100, etc.).
- 9. Public Access. The SWPP Plan is considered a report that shall be available to the public under Section 308(b) of the CWA. Upon request by members of the public, Caltrans shall make available for review a copy of the SWPP Plan either to the Regional Board or directly to the requestor.
- 10. Preparer. The SWPP Plan shall include the signature and title of the person responsible for preparation of the SWPP Plan and include the date of initial preparation and each amendment, thereto.

APPENDIX B

CONSTRUCTION PROJECT STORM WATER POLLUTION PREVENTION PLAN PROVISIONS

- 1. Objectives. The Storm Water Pollution Prevention Plan (SWPP Plan) shall be developed and amended, when necessary, to meet the following objectives:
 - a. To identify pollutant sources that may affect the quality of discharges of storm water associated with construction activity (storm water discharges) from the construction sites, and
 - b. To identify, construct, and implement storm water pollution prevention measures (control practices) to reduce pollutants in storm water discharges to the extent practicable and reasonable from the construction site both during construction and after construction is completed.
- 2. Availability. The SWPP Plan shall be kept on site during construction activity and made available upon request of a representative of the Regional Water Board and/or local agency.

3. Required Changes.

- a. The discharger shall amend the SWPP Plan whenever there is a change in construction or operations which may affect the discharge of significant quantities of pollutants to surface waters, ground water, or a municipal separate storm sewer system. The SWPP Plan should also be amended if it is in violation of any condition of this permit or has not achieved the general objective of reducing pollutants in storm water discharges.
- b. The Regional Water Board, or local agency with the concurrence of the Regional Water Board, may require the discharger to amend the SWPP Plan.
- 4. Project Description. The SWPP Plan shall provide a description of potential sources which are likely to add significant quantities of pollutants to storm water discharges or which may result in non-storm water discharges from the construction site. The SWPP Plan shall include, at a minimum, the following items:
 - a. A map extending approximately one-quarter mile beyond the property boundaries of the construction site showing: the construction site, surface water bodies (including known springs and wetlands¹), known wells, an outline of off-site drainage areas that discharge into the construction site, general topography, and the anticipated discharge location(s) where the construction site's storm water discharges to a municipal storm sewer system or other water body. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.

The determination of whether wetlands exist shall be made by the person who prepares the SWPP Plan and shall not be binding upon any other person.

b. A site map(s) showing:

- i. Location of control practices used during construction;
- ii. Areas used to store soils and wastes;
- iii. Areas of cut and fill;
- iv. Drainage patterns and slopes anticipated after major grading activities are completed;
- v. Areas of soil disturbance;
- vi. Surface water locations;
- vii. Areas of potential soil erosion where control practices will be used during construction;
- viii. Existing and planned paved areas and buildings;
 - ix. Locations of post-construction control practices;
 - x. An outline of the drainage area for each on-site storm water discharge point;
 - xi. Vehicle storage and service areas; and
- xii. Areas of existing vegetation.

c. A narrative description of the following:

- i. Toxic materials that are known to have been treated, stored, disposed, spilled, or leaked in significant quantities onto the construction site;
- ii. Practices to minimize contact of construction materials, equipment, and vehicles with storm water;
- iii. Construction material loading, unloading, and access areas;
- iv. Preconstruction control practices (if any) to reduce sediment and other pollutants in storm water discharges;
- v. Equipment storage, cleaning, and maintenance areas;
- vi. Methods of on-site storage and disposal of construction materials; and
- vii. The nature of fill material and existing data describing the soil and the construction site.
- d. A list of pollutants (other than sediment) that are likely to be present in storm water discharges in significant quantities. Describe the control practices (if different from Item 6 below) appropriate to reduce these pollutants in the storm water discharges.
- e. An estimate of the size of the construction site (in acres or square feet), an estimate of the runoff coefficient of the construction site before and after construction, and an estimate of the percentage of the area of the construction site that is impervious (e.g., pavement, buildings, etc.) before and after construction.
- 5. <u>Minimum Construction Control Measures</u>. The following minimum construction control measures, or their equivalent, shall be considered in the SWPP Plan:
 - a. Limiting construction access routes and stabilizing access points;

b. Stabilizing areas denuded due to construction (prior to the wet season, October 1 through May 1) by using suitable practices including, but not limited to, temporary or permanent seeding, mulching, sod stabilization, erosion control blankets and nets, vegetative buffer strips, protection of trees, plastic covering, application of ground base on areas to be paved;

- c. Protecting adjacent properties by appropriate use of vegetative buffer strips, sediment barriers or filters, dikes or mulching, or by a combination of these measures and other appropriate measures;
- d. Delineating clearing limits, easements, setbacks, sensitive or critical areas and their buffers, trees and drainage courses by marking them in the field;
- e. Stabilizing and preventing erosion from temporary conveyance channels and outlets;
- f. Using sediment controls and filtration to remove sediment from water generated by dewatering;
 - g. Using proper construction material and construction waste storage, handling and disposal practices;
 - h. Using proper vehicle and equipment cleaning, fueling and maintenance practices;
 - i. Controlling and preventing discharge of all potential pollutants, including, but not limited to, pesticides, petroleum products, nutrients, solid wastes, and construction chemicals, that occur on-site during construction; and
 - j. Preparing a contingency plan in the event of unexpected rain or control measure failure including, but not limited to, an immediate response plan, storing extra or alternative control materials on-site (stakes, fences, bales, sheeting, filter cloth, seed, mulch, sod), and notifying the Regional Board and local municipality and other agencies.
- 6. Erosion and Sediment Control. The SWPP Plan shall include:
 - a. A description of soil stabilization practices. These practices shall be designed to preserve existing vegetation where feasible and to revegetate open areas as soon as feasible after grading or construction. In developing these practices, the discharger shall consider: temporary seeding, permanent seeding, mulching, sod stabilization, vegetative buffer strips, protection of trees, or other soil stabilization practices. At a minimum, the operator must implement these practices on all disturbed areas during the rainy season.
 - b. A description or illustration of control practices which, to the extent feasible, will prevent a net increase of sediment load in storm water discharge. In developing control practices, the discharger shall consider a full range of erosion and sediment controls such as detention basins, straw bale dikes, silt fences, earth dikes, brush barriers, velocity dissipation devices, drainage swales, check dams, subsurface drain, pipe slope drain, level spreaders, storm drain inlet protection, rock outlet protection, sediment traps, temporary sediment basins, or other controls. At a minimum, sandbag dikes, silt fences, straw bale dikes, or equivalent controls practices are required for all significant sideslope and downslope

boundaries of the construction area. The discharger must consider site-specific and seasonal conditions when designing the control practices.

- c. Control practices to reduce the tracking of sediment onto public or private roads. These public and private roads shall be inspected and cleaned as necessary.
- d. Control practices to reduce wind erosion.
- 7. Non-Storm Water Management. The SWPP Plan shall include provisions which eliminate or reduce to the extent feasible the discharge of materials other than storm water to the storm sewer system and/or receiving waters. Such provisions shall ensure, to the extent feasible, that no materials are discharged in quantities which will have an adverse effect on receiving waters. Materials other than storm water that are discharged shall be listed along with the estimated quantity of the discharged material.
- 8. Post-Construction Storm Water Management. The SWPP Plan shall describe the control practices to reduce pollutants in storm water discharges after all construction phases have been completed at the site. These must be consistent with all local post-construction storm water management requirements, policies, and guidelines. The discharger must consider site-specific and seasonal conditions when designing the control practices. Operation and maintenance of control practices after construction is completed shall be addressed, including short- and long-term funding sources and the responsible party.
- 9. Waste Management and Disposal. All wastes (including equipment maintenance waste) disposed at the site or removed from the site for disposal shall be disposed of in compliance with Federal, State, and local laws, regulations, and ordinances.
- 10. Maintenance, Inspection, and Repair. The SWPP Plan shall include maintenance, inspections, and repair procedures to ensure that all grade surfaces, walls, dams and structures, vegetation, erosion and sediment control measures, and other protective devices identified in the site plan are maintained in good and effective condition and are promptly repaired or restored.
- 11. Monitoring. The SWPP Plan shall describe procedures for conducting inspections of the construction site prior to anticipated storm events and after actual storm events to identify areas contributing to a discharge associated with construction activity. These inspections shall evaluate whether control measures to reduce to pollutants in discharges are effective and properly implemented or whether additional control measures are needed. A record of the inspections must include the date of the inspection, the individual(s) who performed the inspection, inspection observations, and inspection evaluation.
 - 12. Reports. An annual report for the construction project shall be prepared and submitted as part of the Annual Report required by this permit. The annual report shall include a description of the status of the project and expected completion date; a summary of monitoring results, and certification that the project is in compliance with its SWPP Plan and the conditions of this permit.

If certification of compliance is not possible, then the report shall identify the type(s) of non-compliance, describe actions necessary to achieve compliance, and include a time schedule, acceptable to the Executive Officer, for achieving compliance.

- 13. Training. The SWPP Plan shall include procedures to ensure that all inspections required in Section B.4 of the Monitoring Program and Reporting Requirements of this permit and maintenance and repair required in Paragraph 10 of this Section are done by trained personnel.
- 14. <u>List of Contractors/Subcontractors</u>. The SWPP Plan shall include a list of all contractors (or subcontractors) responsible for implementing the SWPP Plan.
- 15. Other Plans. The SWPP Plan may incorporate, by reference, the appropriate elements of other plans required by local, State, or Federal agencies. A copy of any requirements incorporated by reference shall be kept at the construction site.
- 16. Public Access. The SWPP Plan is considered a report that shall be available to the public under Section 308(b) of the CWA. Upon request by members of the public, the discharger shall make available for review a copy of the SWPP Plan either to the Regional Water Board or directly to the requestor.
- 17. Preparer. The SWPP Plan shall include the signature and title of the person responsible for preparation of the SWPP Plan and include the date of initial preparation and each amendment, thereto.

APPENDIX C

STANDARD PROVISIONS

1. Duty to Comply

The Discharger must comply with all of the conditions of this Permit. Any permit noncompliance constitutes a violation of the Clean Water Act and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the requirement.

2. Permit Actions

This Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Permit, this Permit shall be modified, or revoked and reissued to conform to the toxic effluent standard or prohibition, and the Discharger so notified.

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

4. Duty to Mitigate

The Discharger shall take all responsible steps to minimize or prevent any discharge in violation of this Permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation

and maintenance may require the operation of backup or auxiliary facilities or similar systems, installed by a Discharger when necessary to achieve compliance with the conditions of this Permit.

6. Property Rights

This Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Duty to Provide Information

The Discharger shall furnish the Regional Board, State Board, USEPA, or local storm water management agency within a reasonable time specified by the agencies, any requested information to determine compliance with this Permit. The Discharger shall also furnish, upon request, copies of records required to be kept by this Permit.

8. Inspection and Entry

The Discharger shall allow the Regional Board, State Board, USEPA, and local storm water management agency upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this Permit;
- b. Have access to and copy at reasonable times, any records that must be kept under the conditions of this Permit; and
- c. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) that are related to or may impact storm water discharge.
- d. Sample or monitor at reasonable times for the purpose of ensuring permit compliance.

9. Signatory Requirements

All reports, certification, or other information required by the Permit or requested by the Regional Board, State Board, EPA, or local storm water management agency shall be signed by a principal executive officer or by a duly authorized representative. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above and retained as part of the Storm Water Management Plan.
- (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company.

(3) If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be reported to the Regional Board and attached to the Storm Water Management Plan prior to submittal of any reports, certifications, or information signed by the authorized representative.

10. Certification

Any person signing documents under Provision 9 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. Reporting Requirements

- a. Planned changes: The Discharger shall give written notice to the Regional Board, and local storm water management agency as soon as possible of any planned physical alteration or additions to its right-of-way and facilities. Notice is required under this provision only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged.
- b. Anticipated noncompliance: The Discharger will give advance notice to the Regional Board, the Program, and local storm water management agency of any planned changes in its right-of-way and facilities or an activity which may result in noncompliance with permit requirements.
- c. Compliance schedules: Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 14 days following each schedule date.
- d. Noncompliance reporting: The Discharger shall report any noncompliance at the time monitoring reports are submitted. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been correct, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

12. Oil and Hazardous Substance Liability

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or may be subject under Section 311 of the CWA.

13. Severability

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

- 14. Penalties for Violations of Permit Conditions.
 - a. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any such section in a permit issued under Section 402. Any person who violates any permit condition of this permit is subject to a civil penalty not to exceed \$25,000 per day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.
 - b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties, in some cases greater than those under the CWA Watershed Protection The Plan shall include a watershed protection plan to:
 - avoid conversion, to the extent practicable, of areas that are particularly susceptible to erosion and sediment loss;
 - preserve areas that provide important water quality benefits and/or are necessary to maintain riparian and aquatic biota; and
 - site development, including roads, highways, and bridges, to protect to the extent practicable the natural integrity of water bodies and natural drainage systems.

Areas of concern include: all creeks, rivers, and sloughs, riparian habitat, wetlands, hill sides, water supply reservoirs, and areas of groundwater recharge. The watershed protection plan shall describe all existing, planned, and potential new and reconstruction facilities, including, but not limited to, roads, highways, bridges, parking areas, inspection stations, and maintenance facilities in all watersheds within the San Francisco Bay Region.

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